ACI MATERIALS JOURNAL

INDEX VOLUME 89, 1992

From a Journal of the American Concrete Institute, January through December 1992

progress through knowledge



American Concrete Institute, Detroit, Michigan

ACI Materials Journal VOLUME 89, 1992

Remove this section and include it with your January through December 1992 Volume 89 issues of the ACI Materials Journal.

Individually authored papers, committee reports, and abstracts of separate ACI publications are indexed in three categories:

1. Title	New test procedure for impact resistance of industrial
	floor products (89-M53) Ephraim Senbetta SeptOct. 1992
2. Author	Senbetta, Ephraim-New test procedure for impact re-
	sistance of industrial floor products (89-M53) SeptOct. 1992
3. Subject	Impact resistance—Industrial floor products—New test procedure (89-M53) SeptOct. 1992

Numbers in the parentheses with each entry constitute the title number of the paper or report. The first number is the

number of the volume in which the paper appeared; the second number is the number of the paper in the volume. For abstracts, which are not assigned a paper number, the identifying abbreviation AB is given; i.e., (89-AB). The month and year indicate the issue in which the material appeared. Page numbers indicate the first page of the item.

Discussion is identified as "Disc." and is indexed under the paper title and the name of each contributor to the discussion. Only discussion which appears in V. 89 is covered in this index. To find discussion of a paper, check the notice given in the issue in which the paper appeared. This notice will indicate where any discussion that developed is published. A similar notice is given with the abstracts of symposia publications. Discussion of symposia papers usually appears one year following publication of the abstract.

A

Abdulianwad, S. N.—Effect of chloride-sulfate ions on reinforcement corrosion and sulfate deterioration in blended cements-Symposium abstract, SP 132-60 (89-AB) May-June 1992. Abrishami, Homayoun H.—Simulation of uniform bond stress (89-M18) Mar.-Apr. 1992. Abstract of: State-of-the-art report: Bond under cyclic loads, ACI 408.2R (88-M68) ACI Committee 408 V. 88 Nov.-Dec. 1991, p. 669 Disc. by Ben C. Gerwick July-Aug. 1992. Abulebdeh, Taher M.—Biaxial testing of repaired concrete (89-M62) Nov-564 Accelerated curing —Silica fume concrete strength and durability posium abstract, SP-132 (89-AB) May-June 1992 316 Accelerated curing of concrete at atmospheric pressure—State of the art, ACI 517.2R-87—Revision (89-CA) ACI Committee 517 July-Aug State of the 1992 Accelerated tests Alkali reactivity of Australian aggregates (89-M2) Jan.-Feb. 1992....13 Duggan test method-Expansion measurements of cements and concretes (89-M50) Sept.-Oct. 1992. Silica-fume blended-cement concrete corrosion monitoring technique (89-M37) July-Aug. 1992.. Accelerating agents-Dry-mix shotcrete durability (89-M29) May-June Action of some aggressive solutions on portland and calcined laterite blended cement concretes—Symposium abstract, SP 132-42 (89-AB) T. Marwan, J. Péra, and J. Ambroise May-June 1992......317 Activation of slag in gypsumless portland cements-SP 132-88 (89-AB) J. Hrazdira May-June 1992 Symposium abstract. Addis, B. J.—Holistic approach to the corrosion of concrete in aqueous environments using indices of aggressiveness-Symposium abstract, SP 131-2 (89-AB) Mar.-Apr. 1992. 218 Adhesion—Carbon fiber-cementitious composite with silica fume-Symposium abstract, SP-132 (89-AB) May-June 1992. 316 Admixtures -Chloride corrosion of steel fiber reinforcement in cement mortars (89-M23) May-June 1992 -Influence on creep and shrinkage of concrete—Symposium abstract, SP-135 (89-AB) Nov.-Dec. 1992. Mineral—Alkali-silica reaction control—Symposium abstract. SP-131 (89-AB) Mar.-Apr. 1992. Mineral—Effect on cement paste-aggregate interface—Symposium abstract, SP-132 (89-AB) May-June 1992 Mineral—Fly ash ultra-fine particles—Symposium abstract, SP-132 (89 AB) May-June 1992. Mineral-Pore structure and chloride permeability of concreteposium abstract, SP-132 (89-AB) May-June 1992

—Mineral—Suppress expansion due to alkali-aggregate reaction—Symposium abstract, SP-132 (89-AB) May-June 1992315
—Shrinkage-reducing—Effects on restrained shrinkage cracking of concrete(89-M33) May-June 1992
Adsorption—Bleed water behavior—Differences between mortar and concrete (89-M35) July-Aug. 1992
Age—Strength relationship—Rate constant model applicability (89-M21 MarApr. 1992
Aggregate gradation—Carbon fiber reinforced cement properties (89-M31 May-June 1992
Aggregates
—Australian—Alkali reactivity potential—Testing methods (89-M2) Jan. Feb. 1992
—Coarse—High-strength concrete mechanical properties (89-M26) May June 1992
-Effect on elastic modulus of high-strength concrete (89-M56) SeptOct 1992
—Strength—Impact on strength of silica fume concrete—Symposium ab stract, SP-132 (89-AB) May-June 1992316
Air classification—Fly ash separation technique—Symposium abstract, SP 132 (89-AB) May-June 1992
Air-entrained concretes
—Soluble alkalies—Production and stability of air-void system (89-M3 JanFeb. 1992
—Vibration influence on void system—Symposium abstract, SP-131 (89 AB) MarApr. 1992.
Air entrainment
-High-strength concrete durability (89-M45) July-Aug. 1992400
—Latex-modified concrete deicer salt scaling resistance (89-M60) Nov.
Dec. 199254
Aïtcin, Pierre-Claude
-Chloride-ion attack on low water-cement ratio pastes containing silic
fume—Symposium abstract, SP 132-79 (89-AB) May-June 1992318
—On predicting modulus of elasticity in high-strength concrete (89-M56)
SeptOct. 1992

Properties and microstructure of high-performance concretes containing

silica fume, slag and fly ash-Symposium abstract, SP 132-50 (89-AB)

-Silica fume in concrete—An overview—Symposium abstract, SP 132-46 (89-AB) May-June 1992317

Thermal stresses in large high-strength concrete columns (89-M8) Jan.-

Disc. closure Influence of coarse aggregate on elastic properties of high

Akman, M. S.—Comparative study of natural pozzolans used in blended cement production—Symposium abstract, SP 132-27 (89-AB) May-June

-Effect of chloride-sulfate ions on reinforcement corrosion and sulfate de-

terioration in blended cements-Symposium abstract, SP 132-60 (89-

performance concrete (88-M54) July-Aug. 1992.

May-June 1992

Feb. 1992

Al-Amoudi, O. S. B.

317

-Disc. Carbonation and chloride-induced corrosion of reinforcement in fly
ash concretes (89-M5) NovDec. 1992602
Alasali, M. M.—Disc. closure Role of concrete incorporating high volumes of fly ash in controlling expansion due to alkali-aggregate reaction (88-
M20) JanFeb. 1992
Alfes, C.—Modulus of elasticity and drying shrinkage of high-strength con-
crete containing silica fume—Symposium abstract, SP 32-89 (89-AB) May-June 1992
Al-Gahtani, A. S.—Reinforcement corrosion-resisting characteristics of
silica-fume blended-cement concrete (89-M37) July-Aug. 1992337 Alhozaimy, Abdulrahman—Statistical variations in the mechanical prop-
erties of carbon fiber reinforced cement composites (89-M14) MarApr.
1992
Ali, Mohammad Golam—Polarization period, current density, and the cathodic protection criteria (89-M27) May-June 1992247
Alkali-aggregate reactions
—Arch bridge rehabilitation and impregnation—Coating system effectiveness—Symposium abstract, SP-131 (89-AB) MarApr. 1992218
-Australian aggregate classification by different test methods (89-M2)
JanFeb. 1992
Dec. 1992
-Expansion and fly ash content-Symposium abstract, SP-132 (89-AB)
Cement composition and concrete durability problems (89-M63) Nov-Dec. 1992. 574 Expansion and fly ash content—Symposium abstract, SP-132 (89-AB) May-June 1992. 316 Hardened concrete microscopical examination—Symposium abstract, SP-131 (89-AB) MarApr. 1992. 218 Mineral admixtures—Role and effectiveness—Symposium abstract, SP-131 (89-AB) MarApr. 1992. Prestressed concrete railroad ties—Cracking problems (89-M39) July-Aug. 1992. 348 Rapid test of concrete expansivity (89-M50) SeptOct. 1992. 469 Alkali silica reaction processes: The conversion of cement alkalies to al-
SP-131 (89-AB) MarApr. 1992218
-Mineral admixtures - Role and effectiveness - Symposium abstract, SP-
Prestressed concrete railroad tiesCracking problems (89-M39) July-
Aug. 1992 348
-Rapid test of concrete expansivity (89-M50) SeptOct. 1992469
Alkali silica reaction processes: The conversion of cement alkalies to al- kali hydroxide—Symposium abstract, SP 131-7 (89-AB) Sidney Diamond
and Mihael Penko MarApr. 1992219
Alkalies —Conversion to alkali hydroxides in concrete pore solutions—Symposium
abstract, SP-131 (89-AB) MarApr. 1992218
abstract, SP-131 (89-AB) MarApr. 1992
—Soluble—Air-void stability (89-M3) JanFeb. 1992
Allowable deflections: The other side of the equation—Symposium abstract, SP 133-6 (89-AB) A. Scanlon and L. Pinheiro July-Aug. 1992
Al-Manaseer, A. A.
-Microstructure of cement-based grouts containing fly ash and brine-
Symposium abstract. SP 132-35 (89-AB) May-June 1992 317
Physical properties of cement grout containing silica fume and super- plasticizer (89-M17) MarApr. 1992
Al-Saadoun, S. S.
—Effect of tricalcium aluminate content of cement on chloride binding and corrosion of reinforcing steel in concrete (89-M1) JanFeb. 19923
Reinforcement corrosion-resisting characteristics of silica-fume blended-
cement concrete (89-M37) July-Aug. 1992337
Alvi, I. A.—Generalized reliability assessment and reliability-based design for structural safety and serviceability—Symposium abstract. SP 133-8 (89-
for structural safety and serviceability—Symposium abstract, SP 133-8 (89-AB) July-Aug. 1992
Ambroise, J. —Action of some aggressive solutions on portland and calcined laterite
blended cement concretes—Symposium abstract, SP 132-42 (89-AB)
May-June 1992
SP 132-40 (89-AB) May-June 1992
Ammann, W.—Static and dynamic long-term behavior of anchors—Sym-
posium abstract, SP 130-8 (89-AB) JanFeb. 1992
134 (89-AB) SeptOct. 1992
Alleholage
-Embedment design examples-Symposium abstract, SP-130 (89-AB) JanFeb. 1992
JanFeb. 1992
teraction—Symposium abstract, SP-130 (89-AB) JanFeb. 1992112 Anchors
-Adhesives for bonding inserts into concrete-Committee report (89-
M12) Jan - Feb. 1992
Behavior, design, and testing in cracked concreteSymposium abstract, SP-130 (89-AB) JanFeb. 1992
—Design guidelines—Symposium abstract, SP-130 (89-AB) JanFeb.
1992
AB) JanFeb. 1992
AB) JanFeb. 1992
sium abstract, SP-130 (89-AB) JanFeb. 1992
SeptOct. 1992
Anchors in concrete—Design and behavior—Symposium abstract, SP- 130 (89-AB) ACI Committee 355 JanFeb. 1992
Application of fracture mechanics to steel-concrete bond analysis—Sym-
posium abstract, SP 134-6 (89-AB) S. L. McCabe, D. Darwin, O. C. Choi,
and H. Hadje-Ghaffari SeptOct. 1992
derwater concrete Symposium shetract SP 132-86 (80 AR) S Kachima

M. Sakamoto, S. Okada, T. Iho, and Y. Nakagawa May-June 1992318 Arakawa, K.—Fracture process zone for concrete for dynamic loading (89– M28) May-June 1992
Arch bridges—Hydrophobic coating system—Long-term assessment— Symposium abstract, SP-131 (89-AB) MarApr. 1992
Arioglu, Ergin—Disc. Influence of coarse aggregate on elastic properties of high performance concrete (88-M54) July-Aug. 1992425
Artificial intelligence—Impact-echo test method—Principles and applica- tions (89-M20) MarApr. 1992
Asakura, E.—Comparative study of natural zeolites and other inorganic admixtures in terms of characterization and properties of motrars—Symposium abstract, SP 132-34 (89-AB) May-June 1992
Ashmawi, W. M.—Crack control design of reinforced concrete beams in flexure—Symposium abstract, SP 134-8 (89-AB) SeptOct. 1992529
Ashour, Samir A.—Mechanical properties of high-strength fiber reinforced concrete (89-M48) SeptOct. 1992
Aswad, A.
 Experience with pre- and post-cracking deflections of pretensioned mem- sers—Symposium abstract, SP 133-11 (89-ABJ July-Aug. 1992433 —Time-dependent deflections of prestressed members: Rational and ap-
proximate methods—Symposium abstract, SP 129-6 (89-AB) JanFeb.
Atlassi, E.—Some moisture sorption properties of silica fume mortar—Symposium abstract, SP 132-49 (89-AB) May-June 1992
Axial loads—Steel fiber reinforced high-strength concretes—Strain-soft- ening behavior (89-M7) JanFeb. 199254
Ayyub, B. M.—Generalized reliability assessment and reliability-based design for structural safety and serviceability—Symposium abstract, SP 133-8 (89-AB) July-Aug. 1992
Azad, A. K.—Crack control design of reinforced concrete beams in flexure—Symposium abstract, SP 134-8 (89-AB) SeptOct. 1992529
Azuma, K.—Properties of high-strength concrete using "classified fly ash"—Symposium abstract, SP 132-3 (89-AB) May-June 1992316

B

Baalbaki, M.—Properties and microstructure of high-performance concretes
containing silica fume, slag and fly ash—Symposium abstract, SP 132-50 (89-AB) May-June 1992
Baalbaki, W.
—On predicting modulus of elasticity in high-strength concrete (89-M56) SeptOct. 1992
—Disc. closure Influence of coarse aggregate on elastic properties of high performance concrete (88-M54) July-Aug. 1992425
Bader, Maher A.—Performance of corrosion resisting steels in chloride-
bearing concrete (89-M47) SeptOct. 1992
Balaguru, P.—Flexural toughness of steel fiber reinforced concrete (89- M59) NovDec. 1992
Ballivy, Gérard
—Drying shrinkage strains: Experimental versus codes (89-M30) May-
June 1992 263
—On predicting modulus of elasticity in high-strength concrete (89-M56)
SeptOct. 1992
abstract, SP 130-9 (89-AB) JanFeb. 1992
Daluch, M. H.—Crack control design of reinforced concrete beams in
flexure—Symposium abstract, SP 134-8 (89-AB) SeptOct. 1992529
Banthia, Nemkumar
-Comparative study of latex-modified concretes and normal concretes
subjected to freezing and thawing in the presence of a deicer salt solu-
tion (89-M60) NovDec. 1992
 —Influence of soluble alkalies on the production and stability of the air- void system in superplasticized and nonsuperplasticized concrete (89-
M3) JanFeb. 1992
crete (88-M16) JanFeb. 1992106
Base plates—Stiffness effect on anchorage system performance—Sympo-
sium abstract, SP-130 (89-AB) JanFeb. 1992112
Basheer, P. A. M.
—Influence of curing conditions on the durability related properties of near
surface concrete and cement mortars—Symposium abstract, SP 131-5 (89-AB) MarApr. 1992
—In-situ assessment of durability of concrete motorway bridges—Sym-
posium abstract, SP 131-16 (89-AB) MarApr. 1992219
Basson, J. J.—Holistic approach to the corrosion of concrete in aqueous environments using indices of aggressiveness—Symposium abstract, SP 131-
2 (89-AB) MarApr. 1992
Batrakov, V. G.—Influence of different types of silica tume having varying
silica content on the microstructure and properties of concrete—Symposium abstract, SP 132-51 (89-AB) May-June 1992317
Batson, Gordon B.—Disc. closure Fracture toughness of fiber reinforced concrete (88-M41) May-June 1992
Baweja, DMeasurement of corrosion of steel reinforcement under high
chloride conditions—Symposium abstract, SP 132-83 (89-AB) May-June 1992
Bayasi, Ziad
-Effect of steel fiber reinforcement on fresh mix properties of concrete (89-
M41) July-Aug. 1992

Disc. closure Fiber-type effects on the performance of steel fiber reinforced concrete (88-M16) JanFeb. 1992106	-Concrete dura
Sažant, Zdeněk P. —Rate effects and load relaxation in static fracture of concrete (89-M49) SeptOct. 1992	—Durability per Symposium al
—Should design codes consider fracture mechanics size effect?—Sympo-	Durability per
sium abstract, SP 134-1 (89-AB) SeptOct. 1992528	—Hydration stu
Jeams	1992
-Crack control design for flexure-Symposium abstract, SP-134 (89-AB)	—Materials and June 1992
SeptOct. 1992	-Properties of r
JanFeb. 1992	May-June 199
—Fiber reinforcement—Shear strength and failure modes (89-M54) Sept.—	Bloomquist, Day
Oct. 1992	and method for or Boisvert, J.—De
-Fracture relaxation tests (89-M49) SeptOct. 1992456	pavements conta
-Macrocracking in reinforced and prestressed concrete-Symposium ab-	132-10 (89-AB)
stract, SP-133 (89-AB) July-Aug. 1992	Bond —Concrete to co
posium abstract, SP-129 (89-AB) JanFeb. 1992112	report (89-M1
—Size effect in reinforced concrete design—Symposium abstract, SP-134	-Concrete to re
(89-AB) SeptOct. 1992	finement (89-
under load due to reinforcement corrosion—Symposium abstract, SP 132-	—Concrete to re sium abstract,
80 (89-AB) May-June 1992	-Concrete to re
Behavior, design and testing of anchors in cracked concrete—Sympo-	crete (89-M10
sium abstract, SP 130-5 (89-AB) R. Eligehausen JanFeb. 1992	—Concrete to retests (89-M22)
surface-mounted baseplates—Symposium abstract, SP 130-4 (89-AB) R.	-Concrete to re
Cook and R. Klingner JanFeb. 1992112	JanFeb. 199
Behavior of fresh concrete during vibration, ACI 309.1R-81 (Revised	-Plastic concre
1986)—Revision (89-CA) ACI Committee 309 NovDec. 1992605 Behavior of steel fiber reinforced concrete in multiaxial loading (89-M4)	report (89-M) Bond of reinforce
Jenn-Chuan Chern, Hong-Jen Yang, and Hong-Wen Chen JanFeb. 1992	Malvar NovDe
32	Bond-slip mecha
Sehaviour of fasteners under monotonic or cyclic shear displacements— Symposium abstract, SP 130-7 (89-AB) E. Vintzéleou and R. Eligehausen JanFeb. 1992	-Antoine E. N 135 -Disc. by Grac
Benmokrane, Brahim	—Disc. by Grac
-Drying shrinkage strains: Experimental versus codes (89-M30) May-	Bond strength
June 1992	-High-strength
—Disc. closure influence of coarse aggregate on elastic properties of high performance concrete (88-M54) July-Aug. 1992425	June 1992 —Polymer adhe
Berke, N. S Plastic, mechanical, corrosion and chemical resistance prop-	Bond stress
erties of silica fume (microsilica) concretes—Symposium abstract, SP 132-	-Reinforcing
61 (89-AB) May-June 1992	(89-M18) Ma
Sérubé , M. A.—Evaluation of testing methods used for assessing the effectiveness of mineral admixtures in suppressing expansion due to alkali-	—Reinforcing b
aggregate reaction—Symposium abstract, SP 132-31 (89-AB) May-June	Bonding-Polyr
1992317	mittee report (8
Biaxial strength and deformational behavior of plain and steel fiber con-	Bordeleau, Dan
crete (88-M42)Leonard A. Traina and Shahin A. Mansour V. 88 July-Aug. 1991, p. 354	normal concrete icer salt solution
-Disc. by Jean Michel Torrenti; Boualem Djebri; Pierre Rossi; and authors	Boreholes-Blas
May-June 1992	(89-AB) May-J
Biaxial testing of repaired concrete (89-M62) George Z. Voyiadjis and Taher M. Abulebdeh Nov-Dec. 1992564	Branco, Fernan M15) MarApr
Bijen, J. M.	Breitenbücher,
-Effect of mineral admixtures on the cement paste-aggregate interface-	Symposium abs
Symposium abstract, SP 132-36 (89-AB) May-June 1992317	Bridge decks
—Reaction mechanism of blended cements: A 29Si NMR study, The— Symposium abstract, SP 132-44 (89-AB) May-June 1992317	-Latex-modifi Oct. 1992
Symposium abstract, SP 132-44 (89-AB) May-June 1992517 Bilodeau, A.	-Silica fume-
-Concrete incorporating high volumes of ASTM Class F fly ashes: Me-	SP-132 (89-)
chanical properties and resistance to deicing salt scaling and to chloride	Bridges
ion penetration—Symposium abstract, SP 132-19 (89-AB) May-June 1992	—Creep and sh term analysis
-Properties and durability of alkali-activated slag concrete (89-M55) Sept	term analysi
Oct. 1992	Damaged gir
Binders—C ₃ A cements—Corrosion and corrosion inhibition of reinforcing	(89-AB) July
steels (89-M1) JanFeb. 1992	—Prestressed of methods (89-
Symposium abstract, SP 131-1 (89-AB) MarApr. 1992218	-Repair system
Blast furnace slag	Brooks, J. J.
-Alkali-activated-Properties and durability of concrete (89-M55) Sept.	-Creep and sh
Oct. 1992509 —Fineness effect on strength and microstructure of concrete—Symposium	replacement Dec. 1992
abstract, SP-132 (89-AB) May-June 1992	—Influence of
-Hydration and durability of concrete-Symposium abstract, SP-131 (89-	shrinkage, ar
AB) MarApr. 1992	AB) May-Ju
	—Strength and in water at d
— No-slump concrete mixtures—Properties—Symposium abstract, SP-132 (89-AB) May-June 1992.	132-18 (89-/
(89-AB) May-June 1992	134-10 (09-7
(89-AB) May-June 1992	Brown, P. W
(89-AB) May-June 1992	Brown, P. W.— ture, permeabil
(89-AB) May-June 1992	ture, permeabil (89-AB) Mar
(89-AB) May-June 1992	ture, permeabil (89-AB) Mar Brylicki, W.—
(89-AB) May-June 1992 316 - Performance of concrete in seawater environment—Symposium abstract, SP-132 (89-AB) May-June 1992 316 - Properties of concrete containing high volumes (89-M61) NovDec. 1992 554 Bleeding Mortar and concrete—Time-dependent behavior (89-M35) July-	ture, permeabil (89-AB) Mar

132 (89-AB) May-June 1992
-Concrete durability in harsh environments (89-M37) July-Aug. 1992
-Durability performance in high chloride and sulfate salt environments
Symposium abstract, SP-132 (89-AB) May-June 1992316
-Durability performance of concrete (89-M63) Nov-Dec. 1992574
-Hydration studies-Symposium abstract, SP-132 (89-AB) May-June
1992. 316 -Materials and properties—Symposium abstract, SP-132 (89-AB) May- June 1992. 316 -Properties of natural pozzolans—Symposium abstract, SP-132 (89-AB) May June 1992. 316
June 1992 316
Properties of natural pozzolans—Symposium abstract, SP-132 (89-AB)
May-June 1772
oomquist, David—Development of a field permeability test apparatus
and method for concrete (89-M11) JanFeb. 199283 Disvert, J.—Deicer salt scaling resistance of roller-compacted concrete
averments containing fly ash and silica fume—Symposium abstract, SP 32-10 (89-AB) May-June 1992316
32-10 (89-AB) May-June 1992
ond Concrete to concrete—Polymer adhesive selection criteria—Committee
report (89-M12) JanFeb. 199290
 Concrete to reinforcement—Bond-slip behavior under controlled con-
finement (89-M65) NovDec. 1992
-Concrete to reinforcement—Fracture mechanics applications—Symposium abstract, SP-134 (89-AB) SeptOct. 1992
Concrete to reinforcement—High-strength lightweight aggregate con-
Concrete to reinforcement—High-strength lightweight aggregate concrete (89-M10) JanFeb. 1992
-Concrete to reinforcement—High-strength reinforced concrete fatigue
-Concrete to reinforcement—Simulation of uniform bond stress (89-M18)
JanFeb. 1992
JanFeb. 1992
report (89-M12) JanFeb. 199290 ond of reinforcement under controlled confinement (89-M65) L. Javier
Malvar NovDec. 1992593
ond-slip mechanisms of steel fibers in concrete (88-M17)
-Antoine E. Naaman and Husamuddin Najm V. 88 MarApr. 1991, p.
135
—Disc. by Graciela Giaccio and Raul Zerbino and authors JanFeb. 1992
and strength
-High-strength concretes with different coarse aggregates (89-M26) May-
June 1992
ond stress
-Reinforcing bars embedded in concrete-Splitting and pullout failures
(89-M18) MarApr. 1992
—Reinforcing bars with different deformations (89-M65) NovDec. 1992
Sonding—Polymer adhesives—Selection, benefits, and limitations—Com-
mittee report (89-M12) JanFeb. 199290
fordeleau, Daniel—Comparative study of latex-modified concretes and
normal concretes subjected to freezing and thawing in the presence of a de-
loreholes.—Rlast-furnace slag cement usage—Symposium abstract SP-132
(89-AB) May-June 1992
icer salt solution (89-M60) NovDec. 1992
M15) MarApr. 1992139
Symposium abstract, SP 132-43 (89-AB) May-June 1992317
Bridge decks
—Latex-modified concrete overlays—Proposed standard (89-M57) Sept
Oct. 1992
SP-132 (89-AB) May-June 1992316
Bridges
-Creep and shrinkage effects in composite prestressed concrete-Long-
term analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992
Damaged girders—Sensitivity analysis—Symposium abstract SP-133
Damaged girders—Sensitivity analysis—Symposium abstract, SP-133 (89-AB) July-Aug. 1992. 432
(89-AB) July-Aug. 1992

134 (89-AB) SeptOct. 1992	
—Safety provisions for reinforced concrete structures—Symposium abstract, SP-133 (89-AB) July-Aug. 1992432	-Rheological properties (89-M43) July-Aug. 1992
Building codes—General	—Blended with slag, silica fume, and fly ash—Hydration and durability
—Deflection calculations for beams and slabs—Symposium abstract, SP-	studies—Symposium abstract, SP-131 (89-AB) MarApr. 1992218
129 (89-AB) JanFeb. 1992	—Carbon fiber reinforced composites—Use of lightweight aggregates (89- M31) May-June 1992
1992432	-Composition-Influence on concrete durability (89-M63) Nov-Dec.
Burdette, Edwin G.—Disc. closure Splitting tensile strength and compressive strength relationship at early ages (88-M14) JanFeb. 1992106	1992
Bürge, T. A.—Silica fume-polymer mortars for rehabilitation of bridge	Oct. 1992
decks—Symposium abstract, SP 132-68 (89-AB) May-June 1992317	—Fly ash replacement—Corrosion of reinforcement (89-M5) JanFeb.
Bury, Mark A.—Controlled cement hydration: Its effect on durability of concrete—Symposium abstract, SP 131-9 (89-AB) MarApr. 1992219	1992
Butler, W. Barry-Disc. Carbonation and chloride-induced corrosion of	SP-131 (89-AB) MarApr. 1992218
reinforcement in fly ash concretes (89-M5) NovDec. 1992	—Replacement materials—Influence on creep and shrinkage of concrete— Symposium abstract, SP-135 (89-AB) NovDec. 1992
sign—Symposium abstract, SP 134-3 (89-AB) SeptOct. 1992528	-Soluble alkalies-Tests on air-void stability (89-M3) JanFeb. 1992
	—Sulfate resistant—Use of calcium chloride—Symposium abstract, SP-
	131 (89-AB) MarApr. 1992
C	—Tricalcium aluminate—Chloride ion concentrations in pore solutions
	(89-M1) JanFeb. 1992
Calcium chloride in Type V-cement concrete—Symposium abstract, SP	a state of plane-stress—Symposium abstract, SP 134-5 (89-AB) SeptOct.
131-8 (89-AB) Bryant Mather MarApr. 1992219 Calcium chlorides	1992
-Concretes with Type V sulfate-resisting cement-Symposium abstract,	-Drying shrinkage strains: Experimental versus codes (89-M30) May-
SP-131 (89-AB) MarApr. 1992	June 1992
June 1992	performance concrete (88-M54) July-Aug. 1992425
Camber—Pretensioned flexural members—Long-term prediction—Symposium abstract, SP-129 (89-AB) JanFeb. 1992112	Chan, J. F.—Granulation of fly ash lightweight aggregate and accelerated
Carbon	curing technology—Symposium abstract, SP 132-24 (89-AB) May-June 1992
—Fiber reinforced cement—Freeze-thaw tests (89-M52) SeptOct. 1992 491	Chan, Y. W.—Long-term behavior of a composite prestressed concrete
-Fiber reinforced cement—Lightweight aggregate content (89-M31) May-	railway bridge: Part II—Constitutive law and analysis—Symposium ab- stract, SP 129-7 (89-AB) JanFeb. 1992112
June 1992	Chang, W. F.—Shrinkage of statically compacted cement-phosphogypsum
—Fly ash concrete durability—Symposium abstract, SP-132 (89-AB) May- June 1992316	mixtures—Symposium abstract, SP 135-6 (89-AB) NovDec. 1992606 Chemical analysis
Carbonation	-Chloride content in concrete (89-M64) NovDec. 1992587
—Fly ash and plain concrete (89-M5) JanFeb. 1992	—Fly ash—Sulfate resistance of concrete (89-M9) JanFeb. 199269—Pozzolanic cement paste, mortar, and concrete (89-M13) MarApr. 1992
-Reinforcement corrosion in fly ash concrete-Symposium abstract, SP-	119
132 (89-AB) May-June 1992316 Carbonation and chloride-induced corrosion of reinforcement in fly ash	Chen, Hong-Wen—Behavior of steel fiber reinforced concrete in multiaxial loading (89-M4) JanFeb. 199232
concretes (89-M5)	Chern, J. C.
M. N. Haque and M. Kawamura JanFeb. 199241 Disc. by W. Barry Butler, Mohammed Maslehuddin and Omar Saeed	—Behavior of steel fiber reinforced concrete in multiaxial loading (89-M4)
Baghabra Al-Amoudi, and authors NovDec. 1992602	JanFeb. 1992
Carette, Georges G. —Evaluation of polypropylene fiber reinforced high-volume fly ash shot-	Part 1—Experiment—Symposium abstract, SP 129-1 (89-AB) JanFeb.
crete (89-M19) Mar-Apr. 1992	—Long-term behavior of a composite prestressed concrete railway bridge:
-Long-term strength development of silica fume concrete—Symposium	Part II—Constitutive law and analysis—Symposium abstract, SP 129-7
abstract, SP 132-55 (89-AB) May-June 1992317 —Strength development and temperature rise in large concrete blocks con-	(89-AB) JanFeb. 1992
taining high volumes of low-calcium (ASTM Class F) fly ash (89-M40)	amounts of ground granulated blast furnace slag of high fineness—Sym-
July-Aug. 1992	posium abstract, SP 132-74 (89-AB) May-June 1992
-Detection of voids in grouted ducts using the impact-echo method (89-	fume—Symposium abstract, SP 132-79 (89-AB) R. Gagné, M. Pigeon, E.
M34) May-June 1992	Revertégat, and P. C. Aïtcin May-June 1992318 Chloride ions
mixtures (89-M21) MarApr. 1992	—Durability of blended cements—Symposium abstract, SP-132 (89-AB)
Carles-Gibergues, A.—Effects of the use of sulfitic fly ash in mortars and concretes—Symposium abstract, SP 132-37 (89-AB) May-June 1992	May-June 1992
317	posium abstract, SP-132 (89-AB) May-June 1992316
Carrasquillo, R. L. —Effects of intergrinding fly ash on the sulfate resistance of fly ash con-	—Penetrability of superplasticized fly ash concretes (89-M25) May-June 1992
crete—Symposium abstract, SP 132-17 (89-AB) May-June 1992316	-Reinforcement corrosion in fly ash concrete-Symposium abstract, SP-
—Influence of fly ash on the sulfate resistance of concrete (89-M9) Jan Feb. 199269	132 (89-AB) May-June 1992
 Sulfate resistance of concrete containing fly ash—Symposium abstract, 	—C ₃ A effect on binding and corrosion of steel in concrete (89-M1) Jan.
SP 131-13 (89-AB) MarApr. 1992	Feb. 1992
abstract, SP 130-11 (89-AB) JanFeb. 1992113	—Concentration in plant and try ash concrete (89-18125) May-June 1992
Cathodic protection—Selection criteria for reinforced concrete structures	—Corrosion performance evaluation of test steels (89-M47) SeptOct. 1992
(89-M27) May-June 1992	—Diffusion in cement pastes and mortars—Rapid measurement (89-M6)
mortars (89-M23) May-June 1992223	JanFeb. 199249
Cement pastes —Chloride ion diffusion—Rapid measurement (89-M6) JanFeb. 1992	—High-volume fly ash concrete resistance—Symposium abstract, SP-132 (89-AB) May-June 1992316
49	-Penetration depth measurement-Silver nitrate solution spray method
—Cement replaced with silica fume—Strength studies (89-M42) July-Aug. 1992	(89-M64) NovDec. 1992
—Condensed silica fume addition—Reactivity and composition—Sympo-	132 (89-AB) May-June 1992316
sium abstract, SP-132 (89-AB) May-June 1992	Choi, O. C.—Application of fracture mechanics to steel-concrete bond analysis—Symposium abstract, SP 134-6 (89-AB) SeptOct. 1992528
1992481	Chou, T. YLong-term behavior of a composite prestressed concrete
—Low water-cement ratio and silica fume—Chloride ion resistance—Symposium abstract, SP-132 (89-AB) May-June 1992316	railway bridge: Part II—Constitutive law and analysis—Symposium abstract, SP 129-7 (89-AB) JanFeb. 1992112
—Rheological constant measuring method (89-M24) May-June 1992	Clark, Leslie A.—Disc. closure Modeling the structural effects of alkali-ag-

517 Report—Accelerated curing of concrete at atmospheric pressure-State of the art, ACI 517.2R-87-Revision (89-CA) July-Aug. 1992 -548 Report-Proposed ACI Standard: Standard specification for latexmodified concrete (LMC) overlays (ACI 548.4) (89-M57) Sept.-Oct. 521 tion (89-M60) Daniel Bordeleau, Michel Pigeon, and Nemkumar Banthia Comparative study of natural zeolites and other inorganic admixtures in terms of characterization and properties of mortars-Symposium May-June 1992. Composite materials -Carbon fiber reinforced cement-Variations in mechanical properties Time-dependent analysis of prestressed concrete members—Symposium abstract, SP-129 (89-AB) Jan.-Feb. 1992...... Compressive strength -Carbon fiber reinforced cement composites (89-M14) Mar.-Apr. 1992 -Cement paste, mortar, and concrete—Role of silica fume (89-M42) July-Aug. 1992375 -Fly ash and plain concrete—Influence of curing temperature—Symposium abstract, SP-132 (89-AB) May-June 1992 ... Grout containing silica fume and superplasticizer (89-M17) Mar.-Apr. 1992 High volume slag concretes (89-M61) Nov.-Dec. 1992 554 Lightweight aggregate concrete incorporating condensed silica fume (89-M10) Jan.-Feb. 1992 76 -Mixtures containing slags of varying fineness—Symposium abstract, SP-132 (89-AB) May-June 1992 . 316 Polypropylene fiber reinforced high-volume fly ash shotcrete (89-M19) .169 Mar.-Apr. 1992 Structural concrete using high volumes of low-calcium fly ash (89-M40) July-Aug. 1992 Compressive strength of silica fume concrete at higher temperatures Symposium abstract, SP 132-59 (89-AB) T. Kanda, F. Sakuramoto, and K. Suzuki May-June 1992. Computer analysis of the effects of creep, shrinkage, and temperature changes on concrete structures—Symposium abstract, SP-129 (89-AB)
ACI Committee 209 Jan.-Feb. 1992.......112 level nuclear waste: Overview-Symposium abstract, SP 132-39 (89-AB) J. Philip and J. R. Clifton May-June 1992.... Concrete bridge-deck overlays containing silica fume—Symposium abstract, SP 132-69 (89-AB) C. Ozyildirim May-June 1992......317 Concrete design based on fracture mechanics—Symposium abstract, SP-134 (89-AB) ACI Committee 446 Sept.-Oct. 1992. 528 Concrete incorporating a high-volume of ASTM Class C fly ash with high sulfate content—Symposium abstract, SP 132-23 (89-AB) F. Goma May-June 1992... Concrete materials—Research—Symposium abstract, SP-131 (89-AB) Mar.-Apr. 1992.. .218 Concrete microstructure and its relationships to pore structure, per-meability, and general durability—Symposium abstract, SP 131-6 (89-AB) D. M. Roy, D. Shi, B. Scheetz, and P. W. Brown Mar.-Apr. 1992 Concrete structure and protection of steel reinforcement—Symposium abstract, SP 131-1 (89-AB) V. Ukrainčik and D. Bjegović Mar.-Apr. 1992 574 Curing temperature effect on strength development (89-M21) Mar.-Apr.

tars (ACI 503.4-92)-Revision (89-ST) May-June 1992

503.3-92)-Revision (89-ST) May-June 1992 ..

Report-Standard specification for repairing concrete with epoxy mor-

—Fly ash—Sulfate exposure tests (89-M9) JanFeb. 1 —Fracture under dynamic loads (89-M28) May-June 1 —High volumes of ground granulated slag—Properties	992 252
Dec. 1992	ent (89-M40) July-
mates (89-M60) NovDec. 1992	547 89-M42) July-Aug.
Confined concrete—Bond stress and slip study (89-M6	5) NovDec. 1992
Cong, Xiaofeng—Role of silica fume in compressive	593
paste, mortar, and concrete (89-M42) July-Aug. 1992. Connection between the rheology of concrete and rh paste (89-M43) Chiara F. Ferraris and James M. Gaio	neology of cement dis July-Aug. 1992
Connections—Multiple-anchor—Behavior and design posium abstract, SP-130 (89-AB) JanFeb. 1992 Considerations for design of concrete structures su loading, (ACI 215R-74) (Revised 1992)—Revision (i mittee 215 July-Aug. 1992.	guidelines—Sym-
Consistency	
—Cement paste and mortar—Viscosity estimation met accuracy (89-M24) May-June 1992 —Rheological investigation of concrete and cement pa Aug 1992	230 ste (89-M43) July-
Aug. 1992. Controlled cement hydration: Its effect on durability posium abstract, SP 131-9 (89-AB) Ephraim Senbetta MarApr. 1992.	and Mark A. Bury
Cook, R.—Behavior of ductile multiple-anchor steel-tions with surface-mounted baseplates—Symposium	o-concrete connec- abstract, SP 130-4
(89-AB) JanFeb. 1992	strength concrete
Cores —Durability of old concrete roads in Denmark—Symp	osium abstract, SP-
131 (89-AB) MarApr. 1992	th development and
temperature rise (89-M40) July-Aug. 1992 Cornelissen, H. A. W.—Upgrading of PFA for utiliza	ation in concrete—
Symposium abstract, SP 132-26 (89-AB) May-June 19 Corotis, R. B.—Safety provisions in design codes for	92316
structures—Symposium abstract, SP 133-2 (89-AB) Ju Corrosion	
 Chloride ion penetration determination (89-M64) No. Embedded reinforcement—Long-term research stu 	ovDec. 1992 .587 idies—Symposium
Embedded reinforcement—Long-term research stu abstract, SP-131 (89-AB) MarApr. 1992 Protection of reinforcement—Symposium abstraction of the state of the sta	t. SP-131 (89-AB)
MarApr. 1992	ct, SP-131 (89-AB)
-Reinforcement in fly ash concrete—Long-term inv	estigation (89-M5)
JanFeb. 1992	3
—Steel in chloride-admixed mortars (89-M23) May-Ju Corrosion resistance	
Coated reinforcing bars in chloride-bearing concret Oct. 1992. Silica-fume blended-cement concretes (89-M37) Jul Steel in calcium chloride-modified mortars (89-M2).	439
Corrosion resistance of normal and silica fume-modi	223
from different types of cements—Symposium abstra AB) J. Madej May-June 1992	act, SP 132-64 (89-
Crack control design of reinforced concrete beams in sium abstract, SP 134-8 (89-AB) W. M. Ashmawi, M. K. Azad SeptOct. 1992	. H. Baluch, and A.
Cracking —Anchor design and behavior in cracked concrete—S	ymposium abstract.
SP-130 (89-AB) JanFeb. 1992	112
—Fracture mechanics of concrete—Size effect and loa SeptOct. 1992	ading rate (89-M49)
—Heat of hydration effects in concrete structures (89-M	115) MarApr. 1992
-Railroad ties-Precast prestressed concrete (89-M.	39) July-Aug. 1992
—Restrained shrinkage tests—Effects of shrinkage-re (89-M33) May-June 1992	educing admixtures
—Size effect in reinforced flexural members—Symposi (89-AB) SeptOct. 1992	um abstract, SP-134
-Prestressed concrete rehabilitated bridge condition su	rvey (89-M36) July-
Aug. 1992	328

Creep
-Deflection in slender columns-Symposium abstract, SP-129 (89-AB)
JanFeb. 1992
Dec. 1992
Creep and shrinkage of concrete as affected by admixtures and cement
replacement materials—Symposium abstract, SP 135-2 (89-AB) J. J. Brooks and A. Neville NovDec. 1992606
Creep and shrinkage of concrete: Effect of materials and environment—
Symposium abstract, SP-135 (89-AB) ACI Committee 209 NovDec. 1992
Creep buckling of uniaxially loaded reinforced concrete columns—Sym-
posium abstract, SP 129-3 (89-AB) N. C. Mickleborough and R. I. Gilbert
JanFeb. 1992
Symposium abstract, SP 129-5 (89-AB) R. I. Gilbert and N. C. Mickle- borough JanFeb. 1992. 1122 Creep of high-strength concrete containing fly ash and silica fume.
Creep of high-strength concrete containing fly ash and silica fume-
Symposium abstract, SP 135-4 (89-AB) H. M. Marzouk NovDec. 1992
Cripwell, J. B.—Investigation into the long-term in situ performance of high
fly ash content concrete used for structural application—Symposium abstract, SP 132-1 (89-AB) May-June 1992
stract, SP 132-1 (89-AB) May-June 1992
concrete (88-M41) May-June 1992304
Curing
—Blended cement concrete—Porosity studies—Symposium abstract, SP-
132 (89-AB) May-June 1992
132 (89-AB) May-June 1992
stract, SP-131 (89-AB) MarApr. 1992
—High temperature—Silica fume compressive strength—Symposium ab-
stract, SP-132 (89-AB) May-June 1992
Oct 1992
Oct. 1992
AB) May-June 1992
AB) May-June 1992 316 Silica fume concrete durability properties—Symposium abstract, SP-132 (89-AB) May-June 1992 316
(89-AB) May-June 1992
-Thermal stresses in high-strength concrete columns (89-M8) JanFeb
1992
Cyclic loads
—Fastener failure modes under monotonic and cyclic loads—Symposium abstract, SP-130 (89-AB) JanFeb. 1992
-Fatigue strength of high-strength reinforced concrete (89-M22) Mar.
Apr. 1992 1992 1993 1993 1993 1993 1993 1993
(89-AB) SeptOct. 1992
tack (89-M50) Sent -Oct. 1992.

D

Dakhil, Fahd H.—Performance of corrosion resisting steels in chloride- bearing concrete (89-M47) SeptOct. 1992439
bearing concrete (89-M47) SeptOct. 1992
Dallaire, M. P.—Plastic, mechanical, corrosion and chemical resistance properties of silica fume (microsilica) concretes—Symposium abstract, SP 132-61 (89-AB) May-June 1992
Dana, W. R.—Step-by-step integration procedure for computing state of
stress in prestressed concrete pipe—Symposium abstract, SP 129-9 (89-AB) JanFeb. 1992
Danish investigations on silica fume concretes at elevated temperatures
(89-M38) K. D. Hertz July-Aug. 1992345
Darwin, David
—Application of fracture mechanics to steel-concrete bond analysis—Symposium abstract, SP 134-6 (89-AB) SeptOct. 1992
—Role of silica fume in compressive strength of cement paste, mortar, and concrete (89-M42) July-Aug. 1992375
Dave. M. A.—Effect of creep and shrinkage on the design of a nuclear re-
actor containment building-Symposium abstract, SP 129-8 (89-AB) Jan
Feb. 1992
Deatherage, J. Harold—Disc. closure Splitting tensile strength and compressive strength relationship at early ages (88-M14) JanFeb. 1992106
Deflection
-Creep and shrinkage-Reinforced concrete beams-Symposium ab-
stract, SP-129 (89-AB) JanFeb. 1992
—Reinforced concrete—Calculation considerations—Symposium abstract,
SP-133 (89-AB) July-Aug. 1992
Degradation of normal portland and slag cement concrete under load
due to reinforcement corrosion-Symposium abstract, SP 132-80 (89-
AB) K. E. Philipose, J. J. Beaudoin, and R. F. Feldman May-June 1992
Deicer salt scaling resistance of roller-compacted concrete pavements
containing fly ash and silica fume—Symposium abstract, SP 132-10 (89-
AB) J. Marchand, M. Pigeon, J. Boisvert, H. L. Isabelle, and O. Houdusse May-June 1992316
•

Deicers—Latex-modified concrete freeze-thaw durability (89-M60) Nov.— Dec. 1992
Deja, J.—Effect of variable curing conditions on the properties of mortars with silica fume—Symposium abstract, SP 132-58 (89-AB) May-June 1992
de Larrard, F.—Influence of mix composition on mechanical properties of high-performance silica-fume concrete—Symposium abstract, SP 132-52 (89-AB) May-June 1992
(89-AB) May-June 1992
sium abstract, SP 133-7 (89-AB) S. J. Sopko July-Aug. 1992
Design for safety, serviceability and damage tolerability—Symposium abstract, SP 133-12 (89-AB) D. M. Frangopol and M. Klisinski July-Aug.
1992 433
1992
Designing concrete structures for serviceability and safety—Symposium abstract, SP-133 (89-AB) ACI Committee 348 and ACI Committee 435
July-Aug. 1992
Details and detailing of concrete reinforcement (ACI 315-92)—Revision (89-ST) ACI Committee 315 May-June 1992315
Detecting flaws in concrete beams and columns using the impact-echo
method (89-M44) Yiching Lin and Mary Sansalone July-Aug. 1992394
Detection of voids in grouted ducts using the impact-echo method (89-
M34) Nicholas J. Carino and Mary Sansalone May-June 1992296 Deterioration in a rehabilitated prestressed concrete bridge (89-M36)
Toshitaka Ohta, Koji Sakai, Minoru Obi, and Sadamu Ono July-Aug. 1992
328 Deterioration of lightweight fly ash concrete due to gradual cryogenic frost cycles (88-M28)
—Kamal Henri Khayat V. 88 May-June 1991, p. 233 —Disc. by V. R. Sturrup and author MarApr. 1992208
Deterioration of precast concrete panels with crushed quartz coarse ag-
gregate due to alkali-silica reaction—Symposium abstract, SP 131-22 (89-AB) Michael A. Ozol and Donald O. Dusenberry MarApr. 1992
219
Development of a field permeability test apparatus and method for concrete (89-M11) Constantine A. Meletiou, Mang Tia, and David Bloomquist JanFeb. 1992
JanFeb. 1992
stract, SP 134-2 (89-AB) SeptOct. 1992
ment alkalies to alkali hydroxide—Symposium abstract, SP 131-7 (89-AB)
MarApr. 1992
JanFeb. 1992
mentitious composite with silica fume variability in the matrix—Symposium abstract, SP 132-65 (89-AB) May-June 1992317
Djebri, Boualem—Disc. Biaxial strength and deformational behavior of
plain and steel fiber concrete (88-M42) May-June 1992
Do fibers increase the tensile strength of cement-based matrixes? (88-M61)
 Surendra P. Shah V. 88 NovDec. 1991, p. 595 Disc. by N. P. Rajamane and V. S. Parameswaran, and author SeptOct.
1992
Dolch, William L.—Non-air-entrained high-strength concrete—Is it frost resistant? (89-M45) July-Aug. 1992406
Dorner , H. W.—Minimization of leaching of shotcrete by admixtures—
Symposium abstract, SP 132-43 (89-AB) May-June 1992
M55) SeptOct. 1992509
Drying shrinkage —Grout containing silica fume and superplasticizer (89-M17) MarApr.
—Grout containing silica fume and superplasticizer (89-M17) MarApr. 1992. —High-strength concrete with silica fume—Symposium abstract, SP-132 (89-M17) MarApr. 1992. —High-strength concrete with silica fume—Symposium abstract, SP-132 (89-M17) MarApr. 1992.
(89-AD) May-June 1992318
—Strains—Slag concretes (89-M61) NovDec. 1992
1992
posites—Symposium abstract, SP 135-5 (89-AB) P. Soroushian, M. Nagi.
and E. Mustata NovDec. 1992
Chaallal, Brahim Benmokrane, and Gérard Ballivy May-June 1992263 Du, J.—Fracture process zone for concrete for dynamic loading (89-M28)
May-June 1992
tiveness of mineral admixtures in suppressing expansion due to alkali-ag- gregate reaction—Symposium abstract, SP 132-31 (89-AB) May-June 1992
Ductility—Steel fiber reinforced concrete—Multiaxial load tests (89-M4)
JanFeb. 1992 32 Ducts—Grouted—Void location detection method (89-M34) May-June 1992 296
Duppan, C. R.—Rapid test of concrete expansivity due to internal sulfate
attack (89-M50) SeptOct. 1992

of high fly ash content concrete used for structural application-Sympo-
sium abstract, SP 132-1 (89-AB) May-June 1992316
Durability
-Aggregate particle size effect on frost damage of concrete (89-M52)
SeptOct. 1992491
SeptOct. 1992. 491 —Alkali-resistant glass fiber in cement matrix—Symposium abstract, SP-132 (89-AB) May-June 1992. 316 —Arabian Gulf environment—Effect of cement composition on corrosion
132 (89-AB) May-June 1992
-Arabian Gulf environment—Effect of cement composition on corrosion
of reinforcement (89-M37) July-Aug. 1992
SP-132 (89-AR) May-June 1992
SP-132 (89-AB) May-June 1992
-Expansion potential of concrete-Duggan's new accelerated test (89-
M50) SeptOct. 1992
M50) SeptOct. 1992
M25) May-June 1992 238 —High fly ash content concrete used in structural applications—Sympo-
-High fly ash content concrete used in structural applications-Sympo-
sium abstract, SP-132 (89-AB) May-June 1992316
-High-strength concrete-Influence of air-entrainment and silica fume
(89-M45) July-Aug. 1992
-Motorway bridges in Northern Ireland—Chloride induced deteriora-
tion—Symposium abstract, SP-131 (89-AB) MarApr. 1992218
-Prediction—Early-age permeability measurements—Symposium ab-
stract, SP-131 (89-AB) MarApr. 1992
stract, SP-131 (89-AB) MarApr. 1992
MarApr. 1992
MarApr. 1992 218 —Silica fume-polymer mortars for bridge deck repairs—Symposium abstract, SP-132 (89-AB) May-June 1992 316 —Slag concrete activated with sodium silicate (89-M55) SeptOct. 1992
stract, SP-132 (89-AB) May-June 1992316
—Slag concrete activated with sodium silicate (89-M55) SeptOct. 1992
509
Durability of concrete—G. M. Idorn International Symposium—Symposium abstract, SP-131 (89-AB) ACI Committee 201 MarApr. 1992
posium abstract, SF-131 (69-AB) ACI Committee 201 MaiApr. 1992
Durability of concrete in Iceland—Symposium abstract, SP 131-20 (89-
AB) R. Kristjánsson and H. Ólafsson MarApr. 1992219
Durability of dry-mix shotcrete containing rapid-set accelerators (89-
M29) Steven H. Gebler, Albert Litvin, William J. McLean, and Ray Schutz
May-June 1992
Durability of fiber reinforced mortar (88-M38)
-K. Kosa, A. E. Naaman, and W. Hansen V. 88 May-June 1991, p. 310
—Disc. by N. P. Rajamane, R. S. Rajogopal, V. S. Parameswaran, and au-
thors MarApr. 1992
Durability of high early strength silica fume concretes subjected to ac-
celerated and normal curing—Symposium abstract, SP 132-63 (89-AB) C. D. Johnston May-June 1992317
Durability of mortars and concretes made with a natural pozzolana—
Symposium abstract, SP 131-11 (89-AB) A. A. Ramezanianpour MarApr.
1002 216
1992 219 Durability of rebars in concrete—Symposium abstract, SP 131-3 (89-AB)
R. N. Swamy MarApr. 1992
Dusenberry, Donald O Deterioration of precast concrete panels with
crushed quartz coarse aggregate due to alkali-silica reaction—Symposium
abstract, SP 131-22 (89-AB) MarApr. 1992219
Dynamic loads
—Fracture mechanics studies (89-M28) May-June 1992
—Rate effect on fracture toughness of concrete (89-M49) SeptOct. 1992
A56
Dynamic tests—Strain-rate sensitivity of concrete (89-M16) MarApr. 1992

Early age permeability measurements for prediction of concrete dura-
bility—Symposium abstract, SP 131-5 (89-AB) John Figg MarApr. 1992
219
Early age shear-friction behavior of high-strength concrete layered sys-
tems at sub-freezing temperatures—Symposium abstract, SP 133-9 (89-
AB) S. T. Kudlapur and E. G. Nawy July-Aug. 1992433
Edahiro, H.—Effect of mixing method on mechanical properties and pore structure of ultra high-strength concrete—Symposium abstract, SP 132-54 (89-AB) May-June 1992
Effect of blast-furnace slag and related materials on the hydration and
durability of concrete—Symposium abstract, SP 131-10 (89-AB) Della
M. Roy May-June 1992 219
Effect of chloride-sulfate ions on reinforcement corrosion and sulfate
deterioration in blended cements—Symposium abstract, SP 132-60 (89-AB) O. S. B. Al-Amoudi, Rasheeduzzafar, S. N. Abduljauwad, and M. Maslehuddin May-June 1992
Effect of creep and shrinkage on the design of a nuclear reactor con-
tainment building—Symposium abstract, SP 129-8 (89-AB) B. L. Myers and M. A. Daye JanFeb. 1992
Effect of curing on the strength development of mortar containing high
volumes of fly ash—Symposium abstract, SP 132-4 (89-AB) L. Vande- walle and F. Mortelmans May-June 1992
Effect of fly ash on alkali-aggregate reaction in marine environment-
Symposium abstract, SP 132-32 (89-AB) H. Ohga and S. Nagataki May-
June 1992 317

Effect of mineral admixtures on the cement paste-aggregate interface— Symposium abstract, SP 132-36 (89-AB) J. A. Larbi and J. M. Bijen May-
June 1992
of ultra high-strength concrete—Symposium abstract, SP 132-54 (89-AB) M. Kakizaki, H. Edahiro, T. Tochigi, and T. Niki May-June 1992
fibre in cement matrices—Symposium abstract, SP 132-62 (89-AB) V.
T. Yimaz and F. P. Glasser May-June 1992
crostructure—Symposium abstract, SP 132-72 (89-AB) May-June 1992
N. Nakamura, M. Sakai, and R. N. Swamy
N. Nakamura, M. Sakai, and R. N. Swamy
(89-M41) M. Ziad Bayasi and Parviz Soroushian July-Aug. 1992369 Effect of tricalcium aluminate content of cement on chloride binding and corrosion of reinforcing steel in concrete (89-M1) Rasheeduzzafar.
S. Ehtesham Hussain, and S. S. Al-Saadoun JanFeb. 1992
Effect of variable curing conditions on the properties of mortars with silica fume—Symposium abstract SP 132-58 (89-AR) I Maolenszy and
J. Deja May-June 1992 317 Effects of intergrinding fly ash on the sulfate resistance of fly ash con-
Carrasquillo May-June 1992
Effects of shrinkage-reducing admixtures on restrained shrinkage cracking of concrete (89-M33) S. P. Shah, M. E. Karaguler, and M. Sariganhuri May-June 1902
gaphuti May-June 1992
June 1992
M6) Ian -Feb 1992
Elfgren, L.—Fracture mechanics approaches in modeling the pullout of anchor bolts—Symposium abstract, SP 134-4 (89-AB) SeptOct. 1992 528
Eligehausen, R.
—Behavior, design and testing of anchors in cracked concrete—Symposium abstract, SP 130-5 (89-AB) JanFeb. 1992112
—Behaviour of fasteners under monotonic or cyclic shear displacements—
Symposium abstract, SP 130-7 (89-AB) JanFeb. 1992112
—Computer simulations of pullout tests of headed anchors in a state of plane-stress—Symposium abstract, SP 134-5 (89-AB) SeptOct. 1992 578
—Lateral blow-out failure of headed studs near a free edge—Symposium
abstract, SP 130-10 (89-AB) JanFeb. 1992
cement concretes—Symposium abstract, SP 132-45 (89-AB) May-June 1992. 317 Embedment design examples based on ACI 349 Appendix B—Sympo-
sium abstract, SP 130-6 (89-AB) K. Ort JanFeb. 1992112
-Steel-Design examples-Symposium abstract, SP-130 (89-AB) Jan.
Embedments —Steel—Design examples—Symposium abstract, SP-130 (89-AB) Jan. Feb. 1992
Environments
-Aggressive-Durability-material selection interaction (89-M37) July-Aug. 1992
(89-M47) Sept -Oct 1992 439
Erdoğan, T. Y.—Investigations on the sulfate resistance of high-lime fly
ash incorporating PC-fa mortars—Symposium abstract, SP 132-16 (89-AB) May-June 1992
Esenli, F.—Comparative study of natural pozzolans used in blended cement production—Symposium abstract, SP 132-27 (89-AB) May-June 1992
Strong B.—Long-term behavior of prestressed and partially prestressed concrete beams: Experimental and numerical results—Symposium abstract.
SP 129-2 (89-AB) JanFeb. 1992
—Cracking of precast concrete sleepers—Microscopic observations (89-M39) July-Aug. 1992
Evaluation
-Industrial floor product degradation due to impact (89-M53) SeptOct. 1992
—Permeability test apparatus and method for in-service concrete structures (89-M11) JanFeb. 1992
(89-M11) JanFeb. 1992. 83 —Shotcrete system with fly ash and polypropylene fiber additions (89-M19) MarApr. 1992. 169
M19) MarApr. 1992
Aug. 1992

ride pe	on of AgNO ₃ solution spray method for measurement of chlo- netration into hardened cementitious matrix materials (89-M64) ii Otsuki, Shigeyoshi Nagataki, and Kenji Nakashita NovDec. 1992
membe	ion of creep and shrinkage deflections of reinforced concrete ers in the current Australian practice—Symposium abstract, SP 89-AB) B. V. Rangan JanFeb. 1992
Evaluate	ion of expansion anchor ultimate tensile capacity prediction ons—Symposium abstract, SP 130-2 (89-AB) R. Walther, C. Sutton Meinheit JanFeb. 1992112
Evaluat crete (ion of polypropylene fiber reinforced high-volume fly ash shot- 89-M19) Dudley R. Morgan, Neil McAskill, Georges G. Carette
SP 132	M. Malhotra Mar-Apr. 1992
eral action Duches Evaluat —Shar	ion of testing methods used for assessing the effectiveness of ministures in suppressing expansion due to alkali-aggregate re—Symposium abstract, SP 132-31 (89-AB) M. A. Bérubé and Jone May-June 1992
—Erra	ta JanFeb. 1992
Expansi —Dug Sept —Expa	gan rapid test method—Core length change measurements (89-M50) -Oct. 1992
memb	
Explosi	ons—Concretes densified with silica fume (89-M38) July-Aug. 1992
Ezeldin sium a	A. S.—Fly ash containing petroleum contaminated soils—Sympo ostract, SP 132-38 (89-AB) May-June 1992
	7
Failure	

Failure —Brittl	e—Size effect law—Symposium abstract, SP-134 (89-AB) Sept
Oct.	1992
(89-1	1992
Failure 1	modes
-Fiber	ns with fiber reinforcement (89-M54) SeptOct. 1992
M13) N) May-June 1992
Fastener	rs
M12	sives for bonding inserts into concrete—Committee report (89-) JanFeb. 199290
-Meta	llic—Behavior and design under seismic conditions—Symposium
Fatigue	act, SP-130 (89-AB) JanFeb. 1992
abstract	SP-130 (89-AR) Ian -Feb 1992
Fatigue	of concrete composed of blast furnace slag or silica fume under
submer	rged conditions—Symposium abstract, SP 132-81 (89-AB) S. Ozaki Sugata May-June 1992
Fatigue	of reinforced silica fume concrete beam under the environment
of wate	er or chloride solution-Symposium abstráct, SP 132-66 (89-AB)
N. Taka	agi, M. Ikeda, and T. Kojima May-June 1992317
Fatigue	
-Rein	forced silica fume concrete beams—Water or chloride solution en- nment—Symposium abstract, SP-132 (89-AB) May-June 1992
-Stren	orth of submerged concrete containing blast furnace slag or silica
fume	Symposium abstract, SP-132 (89-AB) May-June 1992316 ables affecting performance of concrete (89-M22) MarApr. 1992
Fatigue	
under le	nd W. T. Hester MarApr. 1992
80 (80.	AR) May-June 1992
mixture	—Comparative study of natural zeolites and other inorganic ades in terms of characterization and properties of mortars—Sympo
sium at	ostract, SP 132-34 (89-AB) May-June 1992
Ferraris	s, Chiara F.—Connection between the rheology of concrete and rhe of cement paste (89-M43) July-Aug. 1992
Fiber re	inforced concretes
-Dryi SP-1	ng shrinkage strains in cement composites—Symposium abstract 35 (89-AB) NovDec. 1992
—Effe	ct of fiber type on fresh mix properties (89-M41) July-Aug. 1992
—High	strength—Hooked-end steel fibers—Mechanical properties (89
-Micr	SeptOct. 1992

-Polypropylene and polyethylene fibers-Mechanical properties (89-	-Low calcium-Strength development and temperature rise in large con-
M58) NovDec. 1992	crete blocks (89-M40) July-Aug. 1992
May-June 1992	SP-132 (89-AB) May-June 1992316
-Steel fibers-Flexural behavior (89-M59) NovDec. 1992541	-Mortar resistance to seawater-Symposium abstract, SP-132 (89-AB)
—Steel fibers—Multiaxial load tests (89-M4) JanFeb. 199232 Fiber-type effects on the performance of steel fiber reinforced concrete	May-June 1992
(88-M16) —Parviz Soroushian and Ziad Bayasi V. 88 MarApr. 1991, p. 129	SP-132 (89-AB) May-June 1992
— Disc. by Nemkumar Banthia and JF. Trottier and authors JanFeb. 1992	sium abstract, SP-132 (89-AB) May-June 1992316
106	—Role in controlling alkali-aggregate reaction—Symposium abstract, SP-
Fibers Flexural toughness—Influence of type, geometry, and volume fractions	132 (89-AB) May-June 1992
(89-M59) NovDec. 1992	ment and flexural toughness index performance (89-M19) MarApr 1992
properties (89-M41) July-Aug. 1992369	—Sulfate resistance of concrete—Symposium abstract, SP-131 (89-AB)
—Steel—High-strength concrete properties (89-M48) SeptOct. 1992	MarApr. 1992 218 —Sulfitic—Cementitious properties—Symposium abstract, SP-132 (89
—Steel and synthetic—Strength and failure modes of beams (89-M54) SeptOct. 1992499	AB) May-June 1992
ield tests—Permeability—Apparatus and method (89-M11) JanFeb. 1992	132 (89-AB) May-June 1992316
83	Fly ash containing petroleum contaminated soils—Symposium abstract
rigg, John—Early age permeability measurements for prediction of concrete durability—Symposium abstract, SP 131-15 (89-AB) MarApr. 1992	SP 132-38 (89-AB) A. S. Ezeldin, D. A. Vaccari, and R. T. Mueller May June 1992317
Sineness—Slag—Heat of hydration and compressive strength of cement—	Fly ash reduces harmful chloride ions in concrete (89-M25) M. N. Haque O. A. Kayyali, and M. K. Gopalan May-June 1992238
Symposium abstract, SP-132 (89-AB) May-June 1992316	Fly ash, silica fume, slag and natural pozzolans in concrete—Proceed
Finishing—Latex-modified concrete overlays—Proposed standard (89- M57) SeptOct. 1992	ings, Fourth CANMET/ACI International Conference, Istanbul Turkey, May 1992—Symposium abstract, SP-132 (89-AB) May-June
—Anchor bolt fracture behavior—Symposium abstract, SP-134 (89-AB)	Fracture and adhesion properties of a carbon fiber-cementitious com
SeptOct. 1992	posite with silica fume variability in the matrix—Symposium abstract SP 132-65 (89-AB) A. DiTommaso, G. Mantegazza, and A. M. Penna May
130 (89-AB) JanFeb. 1992112	June 1992317
—Fiber reinforced cementitious material mechanical behavior (89-M32) May-June 1992	Fracture mechanics —Precast concrete segmental bridges—Symposium abstract, SP-134 (89)
Fire tests—Silica fume concrete—Danish investigations (89-M38) July-	AB) SeptOct. 1992520
Aug. 1992345	—Size effect considerations in design codes—Symposium abstract, SP
Flexural strength —Carbon fiber reinforced cement composites (89-M14) MarApr. 1992	134 (89-AB) SeptOct. 1992
131	SeptOct. 1992
-High-strength concretes-Influence of aggregate characteristics (89- M26) May-June 1992	Fracture mechanics approaches in modeling the pullout of ancho bolts—Symposium abstract, SP 134-4 (89-AB) L. Elfgren and S. E. Swart
-Polypropylene and polyethylene fiber reinforced concrete (89-M58)	SeptOct. 1992
NovDec. 1992	Fracture process zone for concrete for dynamic loading (89-M28) J. Du J. H. Yon, N. M. Hawkins, K. Arakawa, and A. S. Kobayashi May-Jun
MarApr. 1992	1992
Flexural toughness of steel fiber reinforced concrete (89-M59) P. Bal-	-Dynamic response of concrete under impact loading (89-M28) May-June
aguru, Ramesh Narahari, and Mahendra Patel NovDec. 1992541 Fling, R. S.—Practical considerations in computing deflection of reinforced	—Fly ash and plain concrete—Symposium abstract, SP-132 (89-AB) May
concrete—Symposium abstract, SP 133-4 (89-AB) July-Aug. 1992433	June 199231
Floors —Design and serviceability problems—Symposium abstract, SP-133 (89-	Fracture tests—Rate processes in concrete (89-M49) SeptOct. 199 45
AB) July-Aug. 1992	Fracture toughness of fiber reinforced concrete (88-M41)
—Industrial—Impact resistance of cement-based materials (89-M53) Sept.—Oct. 1992	—Vellore S. Gopalaratnam, Surendra P. Shah, Gordon B. Batson, Marvi E. Criswell, V. Ramakrishnan, and Methi Wecharatana V. 88 July-Aug
Flowability—Mortars containing coal ash—Symposium abstract, SP-132	1991, p. 339
(89-AB) May-June 1992	—Disc. by Colin D. Johnston and authors May-June 1992
Fly ash —Carbonation and reinforcement corrosion—Symposium abstract, SP-132	Frangopol, Dan M.—Design for safety, serviceability and damage tolera bility—Symposium abstract, SP 133-12 (89-AB) July-Aug. 199243.
(89-AB) May-June 1992316	Fratesi, R.—Influence of fly ash on concrete carbonation and rebar corre
Classified-High-strength concrete properties-Symposium abstract, SP-132 (89-AB) May-June 1992316	sion—Symposium abstract, SP 132-14 (89-AB) May-June 199231: Frearson, J. P. H.—Sulfate resistance of mortars containing ground gran
-Composition-Effect on sulfate resistance of concrete (89-M9) JanFeb.	ulated blast-furnace slag with variable alumina content—Symposium at
199269	stract, SP 132-82 (89-AB) May-June 199231
Concrete Corrosion-resistant characteristics (89-M25) May-June 1992	Freeman, R. B.—Effects of intergrinding fly ash on the sulfa e resistance of fly ash concrete—Symposium abstract, SP 132-17 (89-AB) May-Jun
—Concrete containing contaminated petroleum soil —Symposium abstract, SP-132 (89-AB) May-June 1992	1992
Concretes—Carbonation and chloride-induced corrosion of reinforcement (89-M5) Jan-Feb. 1992.	composites (89-M52) Parviz Soroushian, Mohamad Nagi, and Austin Ol
ment (89-M3) JanFeb. 1992	wuegbu SeptOct. 1992
Concretes-Freezing and thawing resistance-Symposium abstract, SP-	50
132 (89-AB) May-June 1992	—Durability—Lightweight carbon fiber reinforced cement composites (89 M52) SeptOct. 1992
May-June 1992316	-Durability-Non-air-entrained hydraulic structures-Symposium at
Consented Wigh suchuma Class E. Consent J. J.	stract, SP-131 (89-AB) MarApr. 1992
-Concretes-High-volume Class F-Strength development and temper- ature rise studies (89-M40) July-Aug. 1992	
ature rise studies (89-M40) July-Aug. 1992	
ature rise studies (89-M40) July-Aug. 1992	—Durability—Shotcrete with rapid-set accelerators (89-M29) May-Jur
ature rise studies (89-M40) July-Ang. 1992	—Durability—Shotcrete with rapid-set accelerators (89-M29) May-Jun 1992 — 25 —Durability of concrete in Iceland—Symposium abstract, SP-131 (89-AE
ature rise studies (89-M40) July-Aug. 1992	—Durability—Shotcrete with rapid-set accelerators (89-M29) May-Jun 1992
ature rise studies (89-M40) July-Aug. 1992	—Durability—Shotcrete with rapid-set accelerators (89-M29) May-Jur 1992 25 —Durability of concrete in Iceland—Symposium abstract, SP-131 (89-AB MarApr. 1992 21 —Fly ash concrete durability—Symposium abstract, SP-132 (89-AB) May
ature rise studies (89-M40) July-Aug. 1992	M60) NovDec. 1992

-Adhesives for bonding applications-Committee report (89-M12) JanFeb. 199290	Grabowski, E.—Rapid test of concrete expansivity due to internal sulfate attack (89-M50) SeptOct. 1992
—Bleed water behavior—Rheological analysis (89-M35) July-Aug. 1992 323	Granulation of fly ash lightweight aggregate and accelerated curing tech- nology—Symposium abstract, SP 132-24 (89-AB) C. L. Hwang, R. Y. Lin,
—Different steel fiber types—Properties of mixes (89-M41) July-Aug. 1992 369	K. M. Hsu, and J. F. Chan May-June 1992 316 Grout
—Flow and deformation prediction—Viscosity equation (89-M24) May- June 1992	—Brine and fly ash effect on microstructure properties—Symposium abstract, SP-132 (89-AB) May-June 1992316
Recological properties (89-M43) July-Aug. 1992	Material selection—Nuclear fuel waste disposal and other civil engineering applications (89-M17) MarApr. 1992.
Frigy, A.—Pull-out tests on steel embedments in concrete—Symposium abstract, SP 130-9 (89-AB) JanFeb. 1992	Guide for making a condition survey of concrete in service, ACI 201.1R- 68 (Revised 1984)—Revision (89-CA) ACI Committee 201 July-Aug. 1992 4322
Frost resistance —Air-void spacing factor (89-M3) JanFeb. 1992	Guide for the selection of polymer adhesives with concrete, ACI 503.5R (89-M12) ACI Committee 503 JanFeb. 1992
Frt'alová, Marta D.—Investigations on the relationship between phase	
composition and chloride corrosion of steel fiber reinforcement in cement mortar (89-M23) May-June 1992. Fu, C. C.—Evaluation and analysis of hammerhead-type pier caps—Sym-	Hadje-Ghaffari, H.—Application of fracture mechanics to steel-concrete bond analysis—Symposium abstract, SP 134-6 (89-AB) SeptOct. 1992
posium abstract, SP 133-13 (89-AB) July-Aug. 1992	528 Halás, Peter—Investigations on the relationship between phase composition and chloride corrosion of steel fiber reinforcement in cement mortar
posium abstract, SP 132-84 (89-AB) May-June 1992	(89-M23) May-June 1992
Symposium abstract, SP 130-10 (89-AB) JanFeb. 1992	concrete beams: Experimental and numerical results—Symposium abstract, SP 129-2 (89-AB) JanFeb. 1992
_	Hamza, Ali M.—Steel and synthetic fibers as shear reinforcement (89-M54) SeptOct. 1992
G	Mar. Apr. 1992
Gagné, R.—Chloride-ion attack on low water-cement ratio pastes containing silica fume—Symposium abstract, SP 132-79 (89-AB) May-June 1992 318	—Carbonation and chloride-induced corrosion of reinforcement in fly ash concretes (89-M5) JanFeb. 1992. —Closure (89-M5) NovDec. 1992. 602.
Gaidis, James M.—Connection between the rheology of concrete and rheology of cement paste (89-M43) July-Aug. 1992	Fly ash reduces harmful chloride ions in concrete (89-M25) May-June 1992 238 Hardened concretes
abstract, SP 132-26 (89-AB) May-June 1992	-Chloride concentration-Simplified measurement method (89-M64 NovDec. 1992587
sea water durability of mortars containing fly ashes and slag—Symposium abstract, SP 132-11 (89-AB) May-June 1992	—Microcracking influence on mass transport properties (89-M46) July-Aug. 1992. Hardening—Temperature and stress distributions—Theoretical and experiments.
accelerators (89-M29) May-June 1992	imental study (89-M15) MarApr. 1992
posium abstract, SP 132-30 (89-AB) May-June 1992317 Generalized reliability assessment and reliability-based design for structural safety and serviceability—Symposium abstract, SP 133-8 (89-AB)	high fly ash content concrete used for structural application—Symposium abstract, SP 132-1 (89-AB) May-June 1992
I. A. Alvi and B. M. Ayyub July-Aug. 1992	and brine—Symposium abstract, SP 132-35 (89-AB) May-June 1992
abstract, SP 134-2 (89-AB) SeptOct. 1992	Hawkins, Neil M. —Fracture process zone for concrete for dynamic loading (89-M28) May June 1992
—Disc. Abstract of: State-of-the-art report: Bond under cyclic loads, ACI	—Strain-rate sensitivity of concrete mechanical properties (89-M16) Mar. Apr. 1992146
408.2R (88-M68) July-Aug. 1992	Heat curing of concrete with and without condensed silica fume—Effect of early temperature history on compressive strength—Symposium about the Sp. 123-64 (20. App. B. L. Lorenz Mer. 1981).
Giaccio, Graciela High-strength concretes incorporating different coarse aggregates (89-	stract, SP 132-56 (89-AB) P. H. Laamanen May-June 1992
M26) May-June 1992	stract, SP-132 (89-AB) May-June 1992
Feb. 1992	Heat of hydration effects in concrete structures (89-M15) Fernando A Branco, Pedro A. Mendes, and E. Mirambell MarApr. 1992
admixtures—Symposium abstract, SP 132-25 (89-AB) May-June 1992	Hertz, K. D.—Danish investigations on silica fume concretes at elevated temperatures (89-M38) July-Aug. 1992
Gilbert, R. I. —Creep buckling of uniaxially loaded reinforced concrete columns—Symposium abstract, SP 129-3 (89-AB) JanFeb. 1992	Hester, W. T.—Fatigue of high-strength reinforced concrete (89-M22) Mar. Apr. 1992.——191 Hicks, M. C.—Plastic, mechanical, corrosion and chemical resistance properties of silica fume (microsilica) concretes—Symposium abstract. SP 132
Symposium abstract, SP 129-5 (89-AB) JanFeb. 1992	61 (89-AB) May-June 1992 317 Higgins, D. D.—Sulfate resistance of mortars containing ground granulated blast-furnace slag with variable alumina content—Symposium abstract, SI
Gjørv, O. E.—Prediction of strength development for silica fume concrete— Symposium abstract, SP 132-53 (89-AB) May-June 1992	132-82 (89-AB) May-June 1992
Glasser, F. P.—Effect of silica rume addition on the durability of aikan-resistant glass fibre in cement matrices—Symposium abstract, SP 132-62 (89-AB) May-June 1992	abstract, SP 132-47 (89-AB) H. Justnes, E. J. Sellevold, and G. Lundeval May-June 1992
Goma, F.—Concrete incorporating a high-volume of ASTM Class C fly ash with high sulfate content—Symposium abstract, SP 132-23 (89-AB) May-	High-strength concrete binders—Part B: Nonevaporable water, self desiccation and porosity of cement paste with and without condenses
June 1992	silica fume—Symposium abstract, SP 132-48 (89-AB) E. J. Sellevold and H. Justnes May-June 1992
paste, mortar, and concrete (89-M42) July-Aug. 1992	High-strength concrete containing silica fume—Impact of aggregate type on compressive strength and E-modulus—Symposium abstract, SI 132-57 (89-AB) J. Lindgard and S. Smeplass May-June 1992
Gopalaratnam, Vellore S.—Disc. closure Fracture toughness of fiber reinforced concrete (88-M41) May-June 1992	High-strength concrete for wall foundation using ternary blended ce ment with intermixture of blast-furnace slag and fly ash—Symposium

-Control-Effect on durability-Symposium abstract,	
MarApr. 1992 —Pozzolan cement concrete (89-M13) MarApr. 1992	
Hydration and carbonation of pozzolanic cements (89- Papadakis, Michael N. Fardis, and Costas G. Vayenas	M13) Vagelis G. MarApr. 1992
Hydraulic structures—Frost damage assessment in non-a crete—Symposium abstract, SP-131 (89-AB) MarApr.	ir-entrained con-

1

Idorn, G. M.—Disc. Modeling the structural effects of alkali-aggregate re-
actions on reinforced concrete (88-M33) Mar-Apr. 1992
May-June 1992
vironment of water or chloride solution—Symposium abstract, SP 132-66 (89-AB) May-June 1992
Iketani, Junichi—Rheological analysis of the behavior of bleed water from
freshly cast mortar and concrete (89-M35) July-Aug. 1992
dure (89-M53) SeptOct. 1992
M53) SeptOct. 1992495
Impact strength —Carbon fiber reinforced cement composite (89-M14) MarApr. 1992 ———————————————————————————————————
—Carbon fiber reinforced cement containing lightweight aggregate (89-M31) May-June 1992
NovDec. 1992535
Impact tests —Automated field system—Development and applications (89-M20) Mar. Apr. 1992.
-Beam and column nondestructive evaluation (89-M44) July-Aug. 1992
——————————————————————————————————————
Impact-echo signal interpretation using artificial intelligence (89-M20) Donald Pratt and Mary Sansalone MarApr. 1992
Impactive loads—Fracture process zone for concrete (89-M28) May-June 1992. 252
Influence of cement composition on concrete durability (89-M63) Rashee-
duzzafar NovDec. 1992
 concrete (88-M54) W. Baalbaki, B. Benmokrane, O. Chaallal, and P. C. Aïtcin V. 88 Sept
Oct. 1991, p. 499
—Disc. by Ergin Arioglu and authors July-Aug. 1992425 Influence of curing conditions on the durability related properties of
near surface concrete and cement mortars—Symposium abstract, SP 131-5 (89-AB) F. R. Montgomery, P. A. M. Basheer, and A. E. Long MarApr. 1992218
Influence of different types of silica fume having varying silica content
on the microstructure and properties of concrete—Symposium abstract, SP 132-51 (89-AB) V. G. Batrakov, S. S. Kaprielov, and A. V. Sheinfeld May-June 1992
Influence of fly ash and moist curing time on concrete permeability— Symposium abstract, SP 132-15 (89-AB) S. L. Marusin May-June 1992
posium abstract, SP 132-14 (89-AB) R. Fratesi, G. Moriconi, and S. Si- moncini May-June 1992
Influence of fly ash on the sulfate resistance of concrete (89-M9) P. J. Tikalsky and R. L. Carrasquillo JanFeb. 1992
Influence of immersion vibration on the void system of air-entrained concrete—Symposium abstract, SP 131-4 (89-AB) M. J. Simon, R. B.
Jenkins, and K. C. Hover MarApr. 1992
Influence of mechanical strength and curing methods on sea water durability of mortars containing fly ashes and slag—Symposium abstract, SP 132-11 (89-AB) A. M. Paillère, G. Platret, P. Roussel, and J. Gawsewitch
May-June 1992
(89-M46) Hani R. Samaha and Kenneth C. Hover July-Aug. 1992416 Influence of mix composition on mechanical properties of high-perfor-
mance silica-fume concrete—Symposium abstract, SP 132-52 (89-AB) F. de Larrard and R. LeRoy May-June 1992317 Influence of residual carbon in fly ash on microstructures and strength
Influence of residual carbon in fly ash on microstructures and strength
development of mortars and concretes—Symposium abstract, SP 132-2 (89-AB) H. Hornain, F. Miersman, and J. Marchand May-June 1992 316
Influence of slag type and replacement level on strength, elasticity,
shrinkage, and creep of concrete—Symposium abstract, SP 132-71 (89- AB) J. J. Brooks May-June 1992

M3) Michel Pigeon, Patrick Plante, Richard Pleau, and Nemkumar Banthia

Influence of steel fibers on strain-softening of high-strength concrete (89-M7) Luc R. Taerwe JanFeb. 1992	Kasai, Y.—Comparative study of natural zeolites and other inorganic admixtures in terms of characterization and properties of mortars—Symposium abstract, SP 132-34 (89-AB) May-June 1992
cretes—Symposium abstract, SP 132-45 (89-ÅB) P. S. Mangat and J. M. El-Khatib May-June 1992	Kashima, S. —Application of high slag and fly ash, low-heat cement to antiwashout un-
In-situ assessment of durability of concrete motorway bridges—Symposium abstract, SP 131-16 (89-AB) P. A. Muhammed Basheer, F. R. Montgomery, and A. E. Long MarApr. 1992219	derwater concrete—Symposium abstract, SP 132-86 (89-AB) May-June 1992
Instruments—Impact-echo testing feasibility for flaw detection in beams and columns (89-M44) July-Aug. 1992	High-strength concrete for wall foundation using ternary blended cement with intermixture of blast-furnace slag and fly ash—Symposium abstract, SP 132-78 (89-AB) May-June 1992
Integrating the design for safety and serviceability—Symposium abstract, SP 133-3 (89-AB) M. Z. Cohn and Z. Lounis July-Aug. 1992433	Kawai, K.—Properties of mortar containing ultra-fine fly ash particles—
Interaction of thermal stress and concrete creep—Symposium abstract,	Symposium abstract, SP 132-6 (89-AB) May-June 1992316 Kawamura, M.
SP 135-3 (89-AB) S. K. Hirata, D. M. Smith, and M. I. Hammons Nov Dec. 1992	—Carbonation and chloride-induced corrosion of reinforcement in fly ash concretes (89-M5) JanFeb. 1992
Interfacial zone—Cement paste and aggregate—Permeability study—Sym-	-Closure (89-M5) NovDec. 1992602
posium abstract, SP-132 (89-AB) May-June 1992	—Pore structure and chloride permeability of concretes containing fly ash,
tent concrete used for structural application—Symposium abstract, SP	blast-furnace slag and silica furne—Symposium abstract, SP 132-9 (89- AB) May-June 1992
132-1 (89-AB) M. R. H. Dunstan, M. D. A. Thomas, J. B. Cripwell, and D. J. Harrison May-June 1992	Kayyali, O. A.—Fly ash reduces harmful chloride ions in concrete (89-M25) May-June 1992
Investigations on the relationship between phase composition and chlo-	Keil, L. Douglas-Physical properties of cement grout containing silica
ride corrosion of steel fiber reinforcement in cement mortar (89-M23) Ivan Janotka, Ľudovit Krajči, Karol Komloš, Marta D. Frt'alová, and Peter	fume and superplasticizer (89-M17) MarApr. 1992
Halás May-June 1992223	Kentgens, A. P. M.—Reaction mechanism of blended cements: A ²⁹ Si NMR study, The—Symposium abstract, SP 132-44 (89-AB) May-June 1992
Investigations on the sulfate resistance of high-lime fly ash incorporating PC-fa mortars—Symposium abstract, SP 132-16 (89-AB) T. Y. Erdoğan,	
M. Tokyay, and K. Ramyar May-June 1992316 Isabelle, H. L.	with polypropylene or polyethylene fibers (89-M58) NovDec. 1992
—Deicer salt scaling resistance of roller-compacted concrete pavements containing fly ash and silica fume—Symposium abstract, SP 132-10 (89-	Khan, Mohammed Mukarram—Performance of corrosion resisting steels in chloride-bearing concrete (89-M47) Sept. Oct. 1992
AB) May-June 1992316	Khayat, K. H.
—Properties and microstructure of high-performance concretes containing silica fume, slag and fly ash—Symposium abstract, SP 132-50 (89-AB)	-Silica fume in concrete—An overview—Symposium abstract, SP 132-46 (89-AB) May-June 1992
May-June 1992	—Disc. closure Deterioration of lightweight fly ash concrete due to gradual
Ishii, M.—Properties of high-strength concrete using "classified fly ash"— Symposium abstract, SP 132-3 (89-AB) May-June 1992316	cryogenic frost cycles (88-M28) MarApr. 1992. 208 Kikukawa, Hiroji—Viscosity equation for fresh concrete (89-M24) May- June 1992. 230
1	Kita, T.—Resistance to freezing and thawing and chloride diffusion of anti- washout underwater concrete containing blast-furnace slag—Symposium
Jan, C. T.—Designing for the effect of progressive cracking in reinforced concrete slabs—Symposium abstract, SP 134-7 (89-AB) SeptOct. 1992 528	abstract, SP 132-84 (89-AB) May-June 1992
Janotka, Ivan-Investigations on the relationship between phase composi-	4 (89-AB) JanFeb. 1992
tion and chloride corrosion of steel fiber reinforcement in cement mortar (89-M23) May-June 1992	Symposium abstract, SP 133-12 (89-AB) July-Aug. 1992
entrained concrete—Symposium abstract, SP 131-4 (89-AB) MarApr. 1992218	—Fracture process zone for concrete for dynamic loading (89-M28) May- June 1992
Jensen, Arne Damgaard—Old concrete roads in Demmark—Symposium abstract, SP 131-21 (89-AB) MarApr. 1992219	Apr. 1992
Johnston, C. D. —Durability of high early strength silica fume concretes subjected to ac-	—Properties of mortar containing ultra-fine fly ash particles—Symposium abstract, SP 132-6 (89-AB) May-June 1992316
celerated and normal curing—Symposium abstract, SP 132-63 (89-AB)	-Study on properties of concrete with ultra-fine particles produced from
May-June 1992	fly ash—Symposium abstract, SP 132-20 (89-AB) May-June 1992
June 1992. 304 Johnston, D.—Role of high volume fly ash in controlling alkali-aggregate reactivity—Symposium abstract, SP 132-33 (89-AB) May-June 1992	Kohno, K.—Properties of high-strength concrete using "classified fly ash"—Symposium abstract, SP 132-3 (89-AB) May-June 1992316
317	Kojima, T.—Fatigue of reinforced silica fume concrete beam under the environment of water or chloride solution—Symposium abstract, SP 132-66
Joo, Y. S.—Serviceability of prestressed composite members—Symposium abstract, SP 129-10 (89-AB) JanFeb. 1992112	(89-AB) May-June 1992
Joshi, R. C.—Utilization of sorbent slurry-injection modified fly ash—Sym-	sition and chloride corrosion of steel fiber reinforcement in cement mortar
posium abstract, SP 132-22 (89-AB) May-June 1992316 Justnes, H.	(89-M23) May-June 1992
-High-strength concrete binders-Part A: Reactivity and composition of	MarApr. 1992
cement pastes with and without condensed silica fume—Symposium ab- stract, SP 132-47 (89-AB) May-June 1992317	Kovácsházy, G.—Pull-out tests on steel embedments in concrete—Symposium abstract, SP 130-9 (89-AB) JanFeb. 1992113
-High-strength concrete binders-Part B: Nonevaporable water, self-des-	Krajči, Ludovit-Investigations on the relationship between phase com-
iccation and porosity of cement paste with and without condensed silica fume—Symposium abstract, SP 132-48 (89-AB) May-June 1992317	position and chloride corrosion of steel fiber reinforcement in cement mortar (89-M23) May-June 1992
K	SP 131-20 (89-AB) MarApr. 1992
Kakizaki, M.—Effect of mixing method on mechanical properties and pore	crete layered systems at sub-freezing temperatures—Symposium abstract,
structure of ultra high-strength concrete—Symposium abstract, SP 132-54 (89-AB) May-June 1992	SP 133-9 (89-ÅB) July-Aug. 1992
Kanazawa, K.—Properties of low-heat generating concrete containing large volumes of blast-furnace slag and fly ash—Symposium abstract, SP 132-7 (89-AB) May-June 1992.—316	
Kanda, T.—Compressive strength of silica fume concrete at higher temperatures—Symposium abstract, SP 132-59 (89-AB) May-June 1992	Laamanen, P. H.—Heat curing of concrete with and without condensed silica fume—Effect of early temperature history on compressive strength—
peratures—Symposium abstract, SP 132-39 (89-AB) May-June 1992	Symposium abstract, SP 132-56 (89-AB) May-June 1992317
Kaprielov, S. S.—Influence of different types of silica fume having varying silica content on the microstructure and properties of concrete—Symposium abstract, SP 132-51 (89-AB) May-June 1992317	LaBorderie, C.—Response of plain and reinforced concrete structures under cyclic loadings—Symposium abstract, SP 134-9 (89-AB) SeptOct. 1992
Karaguler, M. E.—Effects of shrinkage-reducing admixtures on restrained	Lai, C. I.—Strength characteristics of flowable mortars containing coal
shrinkage cracking of concrete (89-M33) May-June 1992289	ash—Symposium abstract, SP 132-8 (89-AB) May-June 1992316

Influence of curing conditions on the durability related properties of near surface concrete and cement mortars-Symposium abstract, SP 131-5 (89-AB) Mar.-Apr. 1992 .. 218 219 Long-term behavior of a composite prestressed concrete railway bridge: Part II—Constitutive law and analysis—Symposium abstract, SP 129-7 (89-AB) J. C. Chern, Y. G. Wu, Y. W. Chan, and T. Y. Chou Jan.-Feb. 1992 112 Long-term strength development of silica fume concrete—Symposium abstract, SP 132-55 (89-AB) G. G. Carette and V. M. Malhotra May-June .317 Low heat cements Blast-furnace slag and fly ash influence on concrete properties— posium abstract, SP-132 (89-AB) May-June 1992 316 Granulated blast-furnace slag cement concrete properties—Symposium stract, SP-132 (89-AB) May-June 1992316 Lundevall, G .- High-strength concrete binders-Part A: Reactivity and Luping, Tang-Rapid determination of the chloride diffusivity in concrete by applying an electrical field (89-M6) Jan.-Feb. 1992

M

Properties of concrete incorporating low quantity of cement and high volumes of ground granulated slag (89-M61) Nov.-Dec. 1992554

Mandel, James A.—Micromechanical finite element model for fiber reinforced cementitious materials (89-M32) May-June 1992. 277
Mangal, R.—Utilization of sorbent slurry-injection modified fly ash—Symposium abstract, SP 132-22 (89-AB) May-June 1992. 316

Manning, David G.—Reflections on steel corrosion in concrete—Symposium abstract, SP 131-17 (89-AB) Mar.-Apr. 1992.......219
Mansour, Shahin A.—Disc. closure Biaxial strength and deformational behavior of plain and steel fiber concrete (88-M42) May-June 1992......310

—Effect of variable curing conditions on the properties of mortars with silica fume—Symposium abstract, SP 132-58 (89-AB) May-June 1992 317

—Deicer salt scaling resistance of roller-compacted concrete pavements

containing fly ash and silica fume—Symposium abstract, SP 132-10 (89-AB) May-June 1992316 —Influence of residual carbon in fly ash on microstructures and strength	Meinheit, D.—Evaluation of expansion anchor ultimate tensile capacity pre- diction equations—Symposium abstract, SP 130-2 (89-AB) JanFeb. 1992
development of mortars and concretes—Symposium abstract, SP 132-2	Meletiou, Constantine A.—Development of a field permeability test appa-
(89-AB) May-June 1992316	ratus and method for concrete (89-M11) JanFeb. 199283
Marine atmospheres	Mendes, Pedro A.—Heat of hydration effects in concrete structures (89-
—Blast furnace slag cement concrete performance—Symposium abstract, SP-132 (89-AB) May-June 1992316	M15) MarApr. 1992
-Fly ash effect on alkali-aggregate reaction-Symposium abstract, SP-	-Corrosion in chloride-admixed mortars (89-M23) May-June 1992223
132 (89-AB) May-June 1992316	—Flexural toughness of fiber reinforced concrete (89-M59) NovDec. 1992
—Reinforced silica fume concrete beams—Fatigue life—Symposium abstract, SP-132 (89-AB) May-June 1992316	—High-strength concrete stress-strain curve (89-M7) JanFeb. 199254
Martin-Calle, S.—Pozzolanic behavior of thermally activated kaolin—Sym-	—Micromechanical studies of cementitious materials (89-32) May-June
posium abstract, SP 132-40 (89-AB) May-June 1992317	1992277
Marusin, S. L.—Influence of fly ash and moist curing time on concrete per- meability—Symposium abstract, SP 132-15 (89-AB) May-June 1992	Miao, Buquan—Thermal stresses in large high-strength concrete columns
316	(89-M8) JanFeb. 1992
Marwan, T.—Action of some aggressive solutions on portland and calcined	-Creep buckling of uniaxially loaded reinforced concrete columns-Sym-
laterite blended cement concretes—Symposium abstract, SP 132-42 (89-	posium abstract, SP 129-3 (89-AB) JanFeb. 1992112
AB) May-June 1992	—Creep effects in slender reinforced and prestressed concrete columns— Symposium abstract, SP 129-5 (89-AB) JanFeb. 1992112
silica fume—Symposium abstract, SP 135-4 (89-AB) NovDec. 1992	Microcracking
M-4-1-4#- M	-Fiber reinforced material-Finite element analysis (89-M32) May-June
Maslehuddin, M. —Effect of chloride-sulfate ions on reinforcement corrosion and sulfate de-	1992
terioration in blended cements—Symposium abstract, SP 132-60 (89-AB) May-June 1992317	Railway sleepers—Australian examination methods (89-M39) July-Aug. 1992. 348
—Disc. Carbonation and chloride-induced corrosion of reinforcement in fly	Micromechanical finite element model for fiber reinforced cementitious
ash concretes (89-M5) NovDec. 1992	materials (89-M32) Kiumars Siah, James A. Mandel, and Belal Rashid Mousa May-June 1992277
—Cement composition and early-age thermal cracking (89-M63) Nov-Dec.	Microscopic features of cracked and uncracked concrete railway
1992	sleepers (89-M39) A. Shayan and G. W. Quick July-Aug. 1992348
stract, SP-132 (89-AB) May-June 1992316	Microscopy—Alkali-aggregate reaction diagnosis—Quantified examina- tion procedure—Symposium abstract, SP-131 (89-AB) MarApr. 1992
—Low-heat generating cements—Fresh and hardened concrete proper-	218
ties—Symposium abstract, SP-132 (89-AB) May-June 1992316	Microstructure—Cement grout mixed with brine and fly ash—Long-term
—Nonlinear temperature distribution prediction (89-M15) MarApr. 1992	performance—Symposium abstract, SP-132 (89-AB) May-June 1992
Mathematical models—High-strength concrete modulus of elasticity pre-	Microstructure of cement-based grouts containing fly ash and brine-
diction (89-M56) SeptOct. 1992	Symposium abstract, SP 132-35 A. A. Al-Manaseer, M. D. Haug, and L.
Mather, Bryant —Calcium chloride in Type V-cement concrete—Symposium abstract, SP	C. Wong (89-AB) May-June 1992
131-8 (89-AB) Bryant Mather MarApr. 1992219	and strength development of mortars and concretes—Symposium abstract,
—Disc. Modeling the structural effects of alkali-aggregate reactions on re-	SP 132-2 (89-AB) May-June 1992
inforced concrete (88-M33) MarApr. 1992	Miglio, Bruno—Quantifying microscopical examinations of concrete for AAR and other durability aspects—Symposium abstract, SP 131-14 (89-
duced from fly ash—Symposium abstract, SP 132-20 (89-AB) May-June	AB) MarApr. 1992
1992	Mineralogical investigations of high-lime fly ashes—Symposium abstract,
Matsui, A.—Properties of concrete using newly developed low-heat cements and experiments with mass concrete model—Symposium abstract, SP 132-	SP 132-5 (89-AB) M. Tokyay and F. H. Hubbard May-June 1992316 Minimization of leaching of shotcrete by admixtures—Symposium ab-
76 (89-AB) May-June 1992	stract, SP 132-43 (89-AB) R. Breitenbücher, R. Springenschmid, and H. W.
Maturity—In-place strength development estimation method (89-M21)	Dorner May-June 1992317
MarApr. 1992	Mirambell, E.—Heat of hydration effects in concrete structures (89-M15) MarApr. 1992
mixtures (89-M21) Nicholas J. Carino and Rajesh C. Tank MarApr. 1992	Mitchell, Denis
	-Simulation of uniform bond stress (89-M18) MarApr. 1992161
Mazars, J.—Response of plain and reinforced concrete structures under cyclic loadings—Symposium abstract, SP 134-9 (89-AB) SeptOct. 1992	—Thermal stresses in large high-strength concrete columns (89-M8) Jan
529	Feb. 1992
Mazlum, F.	stract, SP 132-30 (89-AB) M. Geiker and N. Thaulow May-June 1992
-Comparative study of natural pozzolans used in blended cement pro-	Mix proportioning 317
duction—Symposium abstract, SP 132-27 (89-AB) May-June 1992	—Fly ash—Chloride penetration studies (89-M25) May-June 1992238
-Strength of mortar made with cement containing rice husk ash and cured	-Fly ash in concrete subjected to sulfate attack (89-M9) JanFeb. 1992
in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) May-June 1992317	—Latex-modified concrete—Proposed standard (89-M57) SeptOct. 1992
McAskill, Neil—Evaluation of polypropylene fiber reinforced high-volume	-Latex-modified concrete—Proposed standard (87-M37) SeptOct. 1772
fly ash shotcrete (89-M19) Mar-Apr. 1992169	-Shotcrete mixture with polypropylene fiber reinforced high-volume fly
McCabe, S. L. —Application of fracture mechanics to steel-concrete bond analysis—Sym-	ash MarApr. 1992
posium abstract, SP 134-6 (89-AB) SeptOct. 1992	Mixed mode fracture concepts in structural concrete design—Sympo-
-Role of silica fume in compressive strength of cement paste, mortar, and	sium abstract, SP 134-3 (89-AB) O. Buyukozturk and K. M. Lee SeptOct.
concrete (89-M42) July-Aug. 1992	1992
accelerators (89-M29) May-June 1992259	(89-M41) July-Aug. 1992369
Measurement	Miyano, K.—Resistance to freezing and thawing and chloride diffusion of
Cement paste rheologyEffect on workability (89-M43) July-Aug. 1992	anti-washout underwater concrete containing blast-furnace slag—Sympo- sium abstract, SP 132-84 (89-AB) May-June 1992318
—Chloride ion penetration in hardened cementitious materials (89-M64)	Mizobuchi, T.—Utilization of blast-furnace stag and silica fume for con-
NovDec. 1992587	trolling temperature rise in high-strength concrete-Symposium abstract,
-Modulus of elasticity of high-strength concrete (89-M56) SeptOct. 1992	SP 132-77 (89-AB) May-June 1992
Measurement of corrosion of steel reinforcement under high chloride	forced concrete (88-M33)
conditions-Symposium abstract, SP 132-83 (89-AB) D. Baweja May-	-Leslie A. Clark V. 88 MayJune 1991, p. 271
June 1992	—Disc. by G. M. Idorn, Bryant Mather, and author MarApr. 1992208 Models—Porosity-permeability relationship—Symposium abstract, SP-131
lene or polyethylene fibers (89-M58) Parviz Soroushian, Ataullah Khan,	(89-AB) MarApr. 1992218
and Jer-Wen Hsu NovDec. 1992535	Modulus of elasticity
Mechanical properties of high-strength fiber reinforced concrete (89- M48) Faisal F. Wafa and Samir A. Ashour SeptOct. 1992	—Alkali-activated slag concrete (89-M55) SeptOct. 1992
,	0

May-June 1992. 242 - High-strength concrete—Measured and calculated values (89-M56) SeptOct. 1992. 517	Nachtegaal, G. H.— study, The—Symp
Modulus of elasticity and drying shrinkage of high-strength concrete containing silica fume—Symposium abstract, SP 132-89 (89-AB) C. Alfes	Nagao, Y.—Properti of ground granulate stract, SP 132-74 (
May-June 1992 318 Modulus of rupture—High-strength fiber reinforced concrete (89-M48) SeptOct. 1992. 449	Nagataki, S. —Combined effect
Momtazi, A. S.—Pozzolanic activity of calcined red mud—Symposium ab-	ment in fly ash co
stract, SP 132-41 (89-AB) May-June 1992317 Montgomery, F. R.	June 1992 —Effect of fly ash
—Influence of curing conditions on the durability related properties of near surface concrete and cement mortars—Symposium abstract, SP 131-5	Symposium abst —Evaluation of A
(89-AB) MarApr. 1992218	ride penetration
—In-situ assessment of durability of concrete motorway bridges—Symposium abstract, SP 131-16 (89-AB) MarApr. 1992	NovDec. 1992 —Properties of con
Mor, Avi —Fatigue of high-strength reinforced concrete (89-M22) MarApr. 1992	periments with r (89-AB) May-Ju
	Nagi, Mohamad —Drying shrinkag
Feb. 199276	posites—Sympo
Morgan, Dudley R. —Evaluation of polypropylene fiber reinforced high-volume fly ash shot-	-Freeze-thaw dur composites (89-
crete (89-M19) Mar-Apr. 1992	—Optimization of forced cement (8)
abstract, SP 132-67 (89-AB) May-June 1992317	-Statistical variat
Moriconi, G.—Influence of fly ash on concrete carbonation and rebar corrosion—Symposium abstract, SP 132-14 (89-AB) May-June 1992316	forced cement c Najm, Husamuddi
Morris, G.—Numerical model of flat-plate to column connection behavior— Symposium abstract, SP 133-15 (89-AB) July-Aug. 1992433	in concrete (88-M) Nakagawa, Y.—A
Mortars	antiwashout under
—Bleed water behavior (89-M35) July-Aug. 1992323 —Chloride-admixed—Relationship between phase composition and steel	AB) May-June 199 Nakamoto, J.—Stu
corrosion (89-M23) May-June 1992	no-slump concrete May-June 1992
49	Nakamura, N.—E
—Coal ash—Flowability evaluation—Symposium abstract, SP-132 (89- AB) May-June 1992316	strength and micro May-June 1992 Nakashita, Kenji-
—Fly ash and slag additions—Resistance to seawater—Symposium abstract, SP-132 (89-AB) May-June 1992316	Nakashita, Kenji- surement of chlori
-Fly ash ultra-fine particles-Properties-Symposium abstract, SP-132	rials (89-M64) No
(89-AB) May-June 1992	Narahari, Ramesh (89-M59) NovDe
abstract, SP-132 (89-AB) May-June 1992	Nasser, K. W.—Re Symposium abstra
(89-AB) MarApr. 1992218	Nawy, E. G.
Rice husk ash addition—Durability and strength—Symposium abstract, SP-132 (89-AB) May-June 1992316	—Early age shear- tems at sub-free
—Silica fume addition—Corrosion resistance in sulfate solutions—Symposium abstract, SP-132 (89-AB) May-June 1992316	AB) July-Aug. —Macro-cracking
-Silica fume addition-Properties under variable curing conditions-	art—Symposium Neofume—Propert
Symposium abstract, SP-132 (89-AB) May-June 1992	posium abstract, S
—Steel and synthetic fibers as shear reinforcement (89-M54) SeptOct.	Neville, A.—Creep cement replaceme
1992499	NovDec. 1992 New method for a
Mortelmans, F.—Effect of curing on the strength development of mortar containing high volumes of fly ash—Symposium abstract, SP 132-4 (89-	structures-Sym
AB) May-June 1992	Sato, and P. K. M. New prediction m
inforced cementitious materials (89-M32) May-June 1992	sium abstract, SP New test procedur
posium abstract, SP 132-22 (89-AB) May-June 1992316	(89-M53) Ephrain
Mud—Red—Calcined—Pozzolanic properties—Symposium abstract, SP- 132 (89-AB) May-June 1992316	Niki, T.—Effect of ture of ultra high-
Mueller, R. T.—Fly ash containing petroleum contaminated soils—Symposium abstract, SP 132-38 (89-AB) May-June 1992317	AB) May-June 19 Nilsson, Lars-Olof
Mukherjee, P. K New method for assessing frost damage in non-air-en-	crete by applying
trained hydraulic structures—Symposium abstract, SP 131-18 (89-AB) MarApr. 1992219	Nishiwaki, Y.—St using slag cement
Muller, H. S.—New prediction models for creep and shrinkage of concrete—Symposium abstract, SP 135-1 (89-AB) NovDec. 1992606	stract, SP 132-87 Non-air-entraine
Murata, Jiro-Viscosity equation for fresh concrete (89-M24) May-June	M45) Menashi D
Mustata, E.—Drying shrinkage characteristics of carbon fiber reinforced	Nondestructive te
cement composites—Symposium abstract, SP 135-5 (89-AB) NovDec.	—Beam and colu Aug. 1992
Myers, B. L.—Effect of creep and shrinkage on the design of a nuclear re-	-Impact-echo to
actor containment building—Symposium abstract, SP 129-8 (89-AB) Jan Feb. 1992112	MarApr. 1992 —Impact-echo te
	May-June 1992 —Rehabilitated
N N	***************************************
	Notes on internat (89-AB) J. Skalny
Naaman, Antoine E.	Nuclear reactor
Disc. closure Bond-slip mechanisms of steel tibers in concrete (XX-M17)	DISTRIBUTE OU DIE
—Disc. closure Bond-slip mechanisms of steel fibers in concrete (88-M17) JanFeb. 1992	JanFeb. 1992 Nuclear waste—(

mposium abstract, SP 132-44 (89-AB) May-June 1992 erties of super low heat cement incorporating large amounts lated blast furnace slag of high fineness—Symposium ab-4 (89-AB) May-June 1992. ect of carbonation and chloride on corrosion of reinforceh concrete-Symposium abstract, SP 132-13 (89-AB) Mayash on alkali-aggregate reaction in marine environmentabstract, SP 132-32 (89-AB) May-June 199231 AgNO3 solution spray method for measurement of chloon into hardened cementitious matrix materials (89-M64) concrete using newly developed low-heat cements and exth mass concrete model—Symposium abstract, SP 132-76 -June 1992 age characteristics of carbon fiber reinforced cement composium abstract, SP 135-5 (89-AB) Nov.-Dec. 1992 .606 durability of lightweight carbon fiber reinforced cement 89-M52) Sept.-Oct. 1992 of the use of lightweight aggregates in carbon fiber reint (89-M31) May-June 1992...... riations in the mechanical properties of carbon fiber reint composites (89-M14) Mar.-Apr. 1992 -Disc. closure Bond-slip mechanisms of steel fibers M17) Jan.-Feb. 1992 .. Application of high slag and fly ash, low-heat cement to derwater concrete—Symposium abstract, SP 132-86 (89-Study on the effects of blast-furnace slag on properties of rete mixtures—Symposium abstract, SP 132-75 (89-AB) Effect of slag fineness on the development of concrete icrostructure—Symposium abstract, SP 132-72 (89-AB) i-Evaluation of AgNO3 solution spray method for meaoride penetration into hardened cementitious matrix mate-Nov -Dec 1992 esh-Flexural toughness of steel fiber reinforced concrete Dec. 1992... ear-friction behavior of high-strength concrete layered sysreezing temperatures—Symposium abstract, SP 133-9 (89-433 ing and crack control in concrete structures-A state of the sium abstract, SP 133-1 (89-AB) July-Aug. 1992433 erties, flowability, and strength development study-Symt, SP-132 (89-AB) May-June 1992316 eep and shrinkage of concrete as affected by admixtures and ement materials—Symposium abstract, SP 135-2 (89-AB) r assessing frost damage in non-air-entrained hydraulic ymposium abstract, SP 131-18 (89-AB) R. D. Hooton, J. A. Mukherjee Mar.-Apr. 1992 of mixing method on mechanical properties and pore struch-strength concrete—Symposium abstract, SP 132-54 (89lof-Rapid determination of the chloride diffusivity in con-ent and portland cement with silica fume—Symposium ab-87 (89-AB) May-June 1992318 ned high-strength concrete—Is it frost resistant? (89-D. Cohen, Yixia Zhou, and William L. Dolch July-Aug. olumn evaluation-Impact-echo technique (89-M44) Julyo technique—Automated signal interpretation (89-M20) test method for void detection in grouted ducts (89-M34) ed prestressed concrete bridge (89-M36) July-Aug. 1992 328 national concrete research—Symposium abstract, SP-131 alny Mar.-Apr. 1992... or containment—Building design—Effect of creep and prestressing system—Symposium abstract, SP-129 (89-AB)

-Reaction mechanism of blended cements: A 29Si NMR

Nuclear waste—Concrete disposal structrues—Symposium abstract, SP-

132 (89-AB) May-June 1992 ...

sium abstract, SP 133-15 (89-AB) H. Omar and G. Morris July-Aug. 1992

Obi, Minoru—Deterioration in a rehabilitated prestressed concrete bridge
(89-M36) July-Aug. 1992
Ohga, H. Combined effect of carbonation and chloride on corrosion of reinforce-
ment in fly ash concrete—Symposium abstract, SP 132-13 (89-AB) May- lune 1992
—Effect of fly ash on alkali-aggregate reaction in marine environment— Symposium abstract, SP 132-32 (89-AB) May-June 1992
Ohta, Toshitaka—Deterioration in a rehabilitated prestressed concrete
bridge (89-M36) July-Aug. 1992
Okada, S.—Application of high slag and fly ash, low-heat cement to anti- washout underwater concrete—Symposium abstract, SP 132-86 (89-AB) May-June 1992
Okawa, Y Study on properties of concrete with ultra-fine particles pro-
duced from fly ash—Symposium abstract, SP 132-20 (89-AB) May-June 1992
Okazawa, S Study on properties of concrete with ultra-fine particles pro-
duced from fly ash—Symposium abstract, SP 132-20 (89-AB) May-June 1992
inforced cement composites (89-M52) SeptOct. 1992
Olafsson, H.—Durability of concrete in Iceland—Symposium abstract, SP 131-20 (89-AB) MarApr. 1992
AB) Ame Damgaard Jensen MarApr. 1992219
Oluokun, Francis A Disc. closure Splitting tensile strength and com-
pressive strength relationship at early ages (88-M14) JanFeb. 1992106
Omar, H.—Numerical model of flat-plate to column connection behavior—
Symposium abstract, SP 133-15 (89-AB) July-Aug. 1992
On predicting modulus of elasticity in high-strength concrete (89-M56) Walid Baalbaki, Pierre-Claude Aïtcin, and Gérard Ballivy SeptOct. 1992 517
Ono, Sadamu—Deterioration in a rehabilitated prestressed concrete bridge (89-M36) July-Aug. 1992. 328
Optimization
—Design for safety, serviceability, and damage tolerability—Symposium abstract, SP-133 (89-AB) July-Aug. 1992.
Lightweight aggregates in carbon fiber reinforced cement composites (89-M31) May-June 1992
Optimization of the use of lightweight aggregates in carbon fiber reinforced cement (89-M31) Parviz Soroushian, Mohamad Nagi, and Jer-Wen Hsu May-June 1992267
Orr, R.—Embedment design examples based on ACI 349 Appendix B-
Symposium abstract, SP 130-6 (89-AB) JanFeb. 1992112
Osborne, G. J.—Performance of portland and blast furnace slag cement concretes in marine environments—Symposium abstract, SP 132-70 (89-
concretes in marine environments—Symposium abstract, SP 132-70 (89-AB) May-June 1992. 318 Otsuki, Nobuaki—Evaluation of AgNO ₃ solution spray method for measurement of chloride penetration into hardened cementitious matrix materials.
rials (89-M64) NovDec. 1992
May-June 1992
May-June 1992 318 Ozol, Michael A.—Deterioration of precast concrete panels with crushed quartz coarse aggregate due to alkali-silica reaction—Symposium abstract, SP 131-22 (89-AB) MarApr. 1992 219
Ozyildirin, C.—Concrete bridge-deck overlays containing silica fume—
Symposium abstract, SP 132-69 (89-AB) C. Ozyildirim May-June 1992 317
P

Paillère, A. M.—Influence of mecha sea water durability of mortars conta abstract, SP 132-11 (89-AB) May-Ju	ining fly ashes and slag-Symposium
Papadakis, Vagelis G.—Hydration a (89-M13) MarApr. 1992	nd carbonation of pozzolanic cements
Papayianni, J.—Performance of a hig concrete—Symposium abstract, SP	th-calcium fly ash in roller-compacted 132-21 (89-AB) May-June 1992316
Parameswaran, V. S. —Disc. Do fibers increase the tensil (88-M61) SeptOct. 1992	e strength of cement-based matrixes?
Disc. Durability of fiber reinforce	ed mortar (88-M38) MarApr. 1992 215
Patching—Biaxial testing setup for r 1992	
Patel, Mahendra—Flexural toughnes M59) NovDec. 1992	s of steel fiber reinforced concrete (89-
PC compound composition—Durabi Nov-Dec. 1992	
Penko, Mihael-Alkali silica reaction	processes: The conversion of cement

alkalies to alkali hydroxide—Symposium abstract, SP 131-7 (89-AB) Mar Apr. 1992
Apr. 1992
titious composite with silica fume variability in the matrix—Symposium abstract, SP 132-65 (89-AB) May-June 1992317
Péra, J.
-Action of some aggressive solutions on portland and calcined laterite
blended cement concretes—Symposium abstract, SP 132-42 (89-AB) May-June 1992
May-June 1992
41 (89-AB) May-June 1992
SP 132-40 (89-AR) May-June 1992
SP 132-40 (89-AB) May-June 1992
May-June 1992
Performance of a high-calcium fly ash in roller-compacted concrete— Symposium abstract, SP 132-21 (89-AB) J. Papaylanni May-June 1992
Performance of corrosion resisting steels in chloride-bearing concrete
(89-M47) Rasheeduzzafar, Fahd H. Dakhil, Maher A. Bader, and Mo-
hammed Mukarram Khan SeptOct. 1992
rine environments—Symposium abstract, SP 132-70 (89-AB) G. J. Os-
borne May-June 1992318
Permeability —Chloride ions in alkali-activated slag concrete (89-M55) SeptOct. 1992
509
—Concretes containing fly ash, blast-furnace slag, and silica fume—Sym-
posium abstract, SP-132 (89-AB) May-June 1992316 —Early-age measurements for durability prediction—Symposium abstract,
SP-131 (89-AB) MarApr. 1992
SP-131 (89-AB) MarApr. 1992
—Fly ash and moist curing influence—Symposium abstract, SP-132 (89-
AB) May-June 1992
AB) May-June 1992 316 - Microcracking in concrete (89-M46) July-Aug. 1992 416 - Rapid measurement method—Symposium abstract. SP-131 (89-AB)
—Rapid measurement method—Symposium abstract, SP-131 (89-AB) MarApr. 1992
Philip, I.—Concrete as an engineered alternative to shallow land disposal
of low level nuclear waste: Overview-Symposium abstract, SP 132-39
of low level nuclear waste: Overview—Symposium abstract, SP 132-39 (89-AB) May-June 1992
under load due to reinforcement corrosion—Symposium abstract, SP 132-
80 (89-AR) May-June 1992
Philleo, Robert E.—Room temperature syndrome: The life and times of Gunnar Idorn—Symposium abstract, SP-131 (89-AB) MarApr. 1992
Physiphogyneum Construction material Shrinkage properties Sympo
218 Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract. SP-135 (89-AB) NovDec. 1992. 605
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992. Physical properties of cement grout containing silica fume and superplasticizer (89-M17) Akthem A. Al-Manascer and L. Douglas Keil Mar
218 Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992
Phosphogypsum—Construction material—Shrinkage properties—Symposium abstract, SP-135 (89-AB) NovDec. 1992

of the air-void system in superplasticized and nonsuperplasticized concrete (89-M3) JanFeb. 199224	(89
Polarization period, current density, and the cathodic protection cri- teria (89-M27) Mohammad Golam Ali and Rasheeduzzafar May-June 1992 	Prop Siun Prop
Polyethylene fibers—Mechanical properties for concrete applications (89- M58) NovDec. 1992	pos
Polypropylene fibers	Prop
-Effect on concrete characteristics (89-M58) NovDec. 1992535 -Shotcrete system used for capping and sealing exposed rock (89-M19)	K. I
MarApr. 1992	Prop
blast-furnace slag and silica fume—Symposium abstract, SP 132-9 (89- AB) K. Torii and M. Kawamura May-June 1992	Proj
-Blended cement concreted-Symposium abstract, SP-132 (89-AB) May-	stra
June 1992	Proj
Hardened pozzolanic cement paste, mortar, and concrete (89-M13) Mar- Apr. 1992 119	Oc
-Type K expansive cement pastes with silica fume addition (89-M51) SeptOct. 1992	no- (89
—Ultra high-strength concrete—Mixing methods—Symposium abstract, SP-132 (89-AB) May-June 1992316	Pro
Portland cements—Gypsumless—Ground slag activation—Symposium abstract, SP-132 (89-AB) May-June 1992316	-
Portland pozzolan cements—Durability—Symposium abstract, SP-131 (89-AB) MarApr. 1992	Pro (A
Pozzolan cements—Hydration and carbonation (89-M13) MarApr. 1992 119	Pro
Pozzolanic activity of calcined red mud—Symposium abstract, SP 132-41 (89-AB) J. Péra and A. S. Momtazi May-June 1992	Pro
Pozzolanic behavior of thermally activated kaolin—Symposium abstract, SP 132-40 (89-AB) J. Ambroise, S. Martin-Calle, and J. Péra May-June	pe
1992. 317 Pozzolanic reactions—Calcined laterite blended cement concretes—Sym-	Pro
posium abstract, SP-132 (89-AB) May-June 1992	Pul of
—Alkali silica reaction prevention—Symposium abstract, SP-132 (89-AB) May-June 1992	Pul
MarApr. 1992	-
Physical and chemical characteristics of hardened cement concrete (89-M13) MarApr. 1992	_
Practical considerations in computing deflection of reinforced con- crete—Symposium abstract, SP 133-4 (89-AB) R. S. Fling July-Aug. 1992 	Pu 1
Pratt Donald Impact echo signal interpretation using artificial intelli-	
gence (89-M20) MarApr. 1992	
Prediction of alkali reactivity potential of some Australian aggregates and correlation with service performance (89-M2) Ahmad Shayan Jan.	Qu
Prediction of strength development for silica fume concrete—Sympo-	d B
Prediction of strength development for silica rume concrete—Sympo- sium abstract, SP 132-53 (89-AB) M. Sandvik and O. E. Gjørv May-June 1992	Qu
Prestress loss—Embedded cylinder pipe—Creep and shrinkage effect on wire relaxation—Symposium abstract, SP-129 (89-AB) JanFeb. 1992	
Prestressed concrete	
-Beams-Long-term behavior-Symposium abstract, SP-129 (89-AB) JanFeb. 1992	Ra
—Bridge rehabilitation—Condition survey after 13 years (89-M36) July-	Ra
Aug. 1992 328 —Bridge structure—Long-term behavior—Symposium abstract, SP-129	Ri
(89-AB) JanFeb. 1992	R
129 (89-AB) JanFeb. 1992	-
sium abstract, SP-129 (89-AB) JanFeb. 1992	-
1992 112 Shear design of beams—Symposium abstract, SP-134 (89-AB) Sept.—	-
Oct. 1992	
Douglas, A. Bilodeau, and V. M. Malhotra SeptOct. 1992509	
Properties and microstructure of high-performance concretes con- taining silica fume, slag and fly ash—Symposium abstract, SP 132-50	Ra
(00 + D) 14 D U 11 C 1 C 1 D C 1	Ri
taining silica fume, slag and fly ash—Symposium abstract, SP 132-50 (89-AB) M. Baalbaki, S. L. Sarkar, P. C. Aitcin, and H. Isabelle May-June 1992	1
Properties of cements containing fly ash together with other admix-	
1992	R
1992	

Properties of concrete using newly developed low-heat cements and ex- periments with mass concrete model—Symposium abstract, SP 132-76 (80 AB). Nacoteki T. Sons, and A. Marvij May, June 1992.				
(89-AB) S. Nagataki, T. Sone, and A. Matsui May-June 1992				
Properties of high-strength concrete using "classified fly ash"—Symposium abstract, SP 132-3 (89-AB) K. Ukita, M. Ishii, K. Yamamoto, K. Azuma, and K. Kohno May-June 1992				
Properties of low-heat generating concrete containing large volumes of blast-furnace slag and fly ash—Symposium abstract, SP 132-7 (89-AB) K. Kanazawa, K. Yamada, and S. Sogo May-June 1992				
Properties of mortar containing ultra-fine fly ash particles—Symposium abstract, SP 132-6 (89-AB) E. Tazawa, A. Yonekura, K. Kawai, H. Kohata, and H. Teramoto May-June 1992				
Properties of super low heat cement incorporating large amounts of ground granulated blast furnace slag of high fineness—Symposium abstract, SP 132-74 (89-AB) T. Tomisawa, T. Chikada, and Y. Nagao MayJune 1992				
Proposed ACI Standard: Standard specification for latex-modified concrete (LMC) overlays (ACI 548.4) (89-M57) ACI Committee 548 Sept. Oct. 1992				
Proposed reapproval of: Standard practice for selecting proportions for no-slump concrete (ACI 211.3-75) (Revised 1987)—Proposed reapproval (89-ST) ACI Committee 211 May-June 1992				
(89-ST) ACI Committee 211 May-June 1992 314 Proposed revision of: Guide to durable concrete, ACI 201.2R (88-M60) —ACI Committee 201 V. 88 SeptOct. 1991, p. 544				
—Disc. by Alexander M. Leshchinsky, Richard A. Mackow, and committee May-June 1992				
Proposed revisions to: Code for concrete reactor vessels and containment (ACI 359-92)—Proposed revisions (89-ST) NovDec. 1992605				
Proposed revisions to: Guide for design and construction of concrete parking lots, ACI 330R-87 (89-CA) ACI Committee 330 SeptOct. 1992———————————————————————————————————				
Proposed revisions to: Standard practice for the use of shrinkage-com- pensating concrete (ACI 223-90)—Proposed revision (89-ST) ACI Com- mittee 223 NovDec. 1992.				
Protective coatings—Reinforcing steel performance in chloride-bearing concrete (89-M47) SeptOct. 1992				
Pukl, R.—Computer simulations of pullout tests of headed anchors in a state of plane-stress—Symposium abstract, SP 134-5 (89-AB) SeptOct. 1992 528				
Pullout tests High-strength, lightweight concrete steel-concrete bond (89-M10) Jan. Feb. 1992				
—Steel anchor behavior and failure mode analysis —Symposium abstract SP-130 (89-AB) JanFeb. 1992112				
Pull-out tests on steel embedments in concrete—Symposium abstract, Sl 130-9 (89-AB) T. Balogh, G. Kovácsházy, and Frigy JanFeb. 1992113				

R
Rahulkumar, P.—Size effect in reinforced flexural members—Symposium abstract, SP 134-2 (89-AB) SeptOct. 1992
Railroad bridges—Composite prestressed concrete long-term behavior— Symposium abstract, SP-129 (89-AB) JanFeb. 1992
Railroad ties—Microscopic features of cracked and uncracked concrete (89- M39) July-Aug. 1992
Rajamané, N. P. —Disc. Do fibers increase the tensile strength of cement-based matrixes (88-M61) SeptOct. 1992
—Disc. Durability of fiber reinforced mortar (88-M38) MarApr. 1992 215
—Disc. Role of concrete incorporating high volumes of fly ash in control- ling expansion due to alkali-aggregate reaction (88-M20) JanFeb. 1992 116
Disc. Testing and evaluation of concrete strength in structures (88-M58 July-Aug. 1992
Rajogopal, R. S.—Disc. Durability of fiber reinforced mortar (88-M38 MarApr. 1992
Ramachandran, S.—Role of high volume fly ash in controlling alkali-aggregate reactivity—Symposium abstract, SP 132-33 (89-AB) May-June 1992.

Ramezanianpour, A. A.—Durability of mortars and concretes made with a natural pozzolana—Symposium abstract, SP 131-11 (89-AB) MarApr. 1992219	Repairs —Biaxial testing of patched concrete specimens (89-M62) Nov-Dec. 1992
Ramyar, K.—Investigations on the sulfate resistance of high-lime fly ash incorporating PC-fa mortars—Symposium abstract, SP 132-16 (89-AB) May-June 1992	—Bridge deck—Latex-modified concrete overlays—Materials and procedures—Proposed standard (89-M57) SeptOct. 1992
Rangan, B, V.	90
-Evaluation of creep and shrinkage deflections of reinforced concrete	Research—Long-term concrete properties affected by early temperature his-
members in the current Australian practice—Symposium abstract, SP	tory—Symposium abstract, SP-131 (89-AB) MarApr. 1992
129-4 (89-AB) JanFeb. 1992112	Resistance of fly ash concrete to freezing and thawing-Symposium ab-
 Serviceability design in current Australian Code Symposium abstract, 	stract, SP 132-12 (89-AB) K. W. Nasser and P. S. H. Lai May-June 1992
SP 133-5 (89-AB) July-Aug. 1992	316
Rapid determination of the chloride diffusivity in concrete by applying	Resistance to freezing and thawing and chloride diffusion of anti-
an electrical field (89-M6) Tang Luping and Lars-Olof Nilsson JanFeb. 199249	washout underwater concrete containing blast-furnace slag—Sympo- sium abstract, SP 132-84 (89-AB) K. Fukudome, K. Miyano, H. Taniguchi,
Rapid test of concrete expansivity due to internal sulfate attack (89-M50)	and T. Kita May-June 1992
-E. Grabowski, B. Czarnecki, J. E. Gillott, C. R. Duggan, and J. F. Scott	Response of plain and reinforced concrete structures under cyclic load-
SeptOct. 1992	ings-Symposium abstract, SP 134-9 (89-AB) C. LaBorderie, J. Mazars,
-Errata NovDec. 1992	and G. Pijaudier-Cabot SeptOct. 1992
Rasheeduzzafar	Resurfacing
-Effect of chloride-sulfate ions on reinforcement corrosion and sulfate de-	—Bridge deck—Latex-modified concrete overlays—Proposed standard
terioration in blended cements-Symposium abstract, SP 132-60 (89-	(89-M57) SeptOct. 1992521
AB) May-June 1992	—Silica fume concrete overlays for bridge deck—Symposium abstract, SP-
-Effect of tricalcium aluminate content of cement on chloride binding and	132 (89-AB) May-June 1992
corrosion of reinforcing steel in concrete (89-M1) JanFeb. 19923	Revertégat, E.—Chloride-ion attack on low water-cement ratio pastes con-
-Influence of cement composition on concrete durability (89-M63) Nov	taining silica fume—Symposium abstract, SP 132-79 (89-AB) May-June
Dec. 1992	1992
(89-M47) SeptOct. 1992	mortar and concrete (89-M35) Minoru Sawaide and Junichi Iketani July-
—Polarization period, current density, and the cathodic protection criteria	Aug. 1992
(89-M27) May-June 1992	Rheological properties
-Reinforcement corrosion-resisting characteristics of silica-fume blended-	—Bleed water from fresh mortar and concrete (89-M35) July-Aug. 1992
cement concrete (89-M37) July-Aug. 1992337	—Concrete and cement paste (89-M43) July-Aug. 1992
Rate effects and load relaxation in static fracture of concrete (89-M49)	-Fresh concrete and mortar (89-M24) May-June 1992230
Zdeněk K. Bažant SeptOct. 1992	Rice husk ash—Pozzolanic activity—Symposium abstract, SP-132 (89-AB)
Reaction mechanism of blended cements: A 29Si NMR study, The—Sym-	May-June 1992316
posium abstract, SP 132-44 (89-AB) H. S. Pietersen, A. P. M. Kentgens,	Roads—Durability study in Denmark—Symposium abstract, SP-131 (89-
G. H. Nachtegaal, W. S. Veeman, and J. M. J. M Bijen May-June 1992	AB) MarApr. 1992218
	Rocco, C.—High-strength concretes incorporating different coarse aggre-
Reflections on limit state design—Symposium abstract, SP 133-14 (89-	gates (89-M26) May-June 1992
AB) W. B. Cranston July-Aug. 1992	Role and effectiveness of mineral admixtures in relation to alkali silica
Reflections on steel corrosion in concrete—Symposium abstract, SP 131-17 (89-AB) David G. Manning MarApr. 1992219	reaction—Symposium abstract, SP 131-12 (89-AB) R. N. Swamy Mar Apr. 1992219
Rehabilitation and impregnation of a concrete arch bridge to inhibit the	Role of concrete incorporating high volumes of fly ash in controlling ex-
further effects of alkali-aggregate reaction and the monitoring of the	pansion due to alkali-aggregate reaction (88-M20)
effectiveness of the coating system—Symposium abstract, SP 131-19 (89-	-M. M. Alasali and V. M. Malhotra V. 88 MarApr. 1991, p. 159
AB) G. E. Hoppe MarApr. 1992	-Disc. by N. P. Rajamane, Val R. Sturrup, and authors JanFeb. 1992
Reinforced concrete	110
-Cement replacement by fly ash-Long-term corrosion studies (89-M5)	Role of high volume fly ash in controlling alkali-aggregate reactivity-
JanFeb. 199241	Symposium abstract, SP 132-33 (89-AB) S. Ramachandran, V. Ramakr-
—Chloride attack—Simplified measurement method (89-M64) NovDec.	ishnan, and D. Johnston May-June 1992317
1992	Role of silica fume in compressive strength of cement paste, mortar, and
—Deflection calculation procedures and accuracy—Symposium abstract,	concrete (89-M42) Xiaofeng Cong, Shanglong Gong, David Darwin, and
SP-133 (89-AB) July-Aug. 1992	Steven L. McCabe July-Aug. 1992
—Polarization period, current density, and cathodic protection criteria (89-M27) May-June 1992	Roller-compacted concrete—Blended silica fume cement—Deicer salt scaling resistance—Symposium abstract, SP-132 (89-AB) May-June 1992
-Protection of steel reinforcement—Symposium abstract, SP-131 (89-	316
AB) MarApr. 1992218	Room temperature syndrome: The life and times of Gunnar Idorn-
—Safety provisions in design codes—Symposium abstract, SP-133 (89-	Symposium abstract, SP-131 (89-AB) Robert E. Philleo MarApr. 1992
AB) July-Aug. 1992	218
-Wire mesh-Restrained shrinkage and cracking (89-M33) May-June	Rossi, Pierre-Disc. Biaxial strength and deformational behavior of plain
1992	and steel fiber concrete (88-M42) May-June 1992310
Reinforcement	Roussel, P.—Influence of mechanical strength and curing methods on sea
-Bond under controlled confinement (89-M65) NovDec. 1992593	water durability of mortars containing fly ashes and slag-Symposium ab-
—Fracture mechanics based design philosophy—Symposium abstract, SP-	stract, SP 132-11 (89-AB) May-June 1992316
134 (89-AB) SeptOct. 1992	Roy, D. M.
—Hooked steel fibers—Properties of concrete (89-M48) SeptOct. 1992	 Concrete microstructure and its relationships to pore structure, permeability, and general durability—Symposium abstract, SP 131-6 (89-AB)
D.L. and a last also of the Marketinal assertion of the	MarApr. 1992219
—Polypropylene and polyethylene fibers—Mechanical properties of concrete materials (89-M58) NovDec. 1992535	—Effect of blast-furnace slag and related materials on the hydration and
—Protective coatings—Symposium abstract, SP-131 (89-AB) MarApr.	durability of concrete—Symposium abstract, SP 131-10 (89-AB) May-
1992	June 1992
—Selection—Chloride exposure environment (89-M47) SeptOct. 1992	7MIN 1772
439	
Reinforcement corrosion-resisting characteristics of silica-fume	
blended-cement concrete (89-M37) Rasheeduzzafar, S. S. Al-Saadoun,	
and A. S. Al-Gahtani July-Aug. 1992	
Reinforcing steels	
-Cathodic protection system (89-M27) May-June 1992247	Safety
—Chloride-bearing concrete—Corrosion evaluation techniques (89-M47)	—Concrete constructed structures—Code treatments and case studies—
SeptOct. 1992	Symposium abstract, SP-133 (89-AB) July-Aug. 1992432
-Chloride-induced corrosion mechanism (89-M1) JanFeb. 19923	-Reinforced concrete structural design code provision assessment—Sym-
-Corrosion in concrete—Mechanism and influencing factors—Sympo-	posium abstract, SP-133 (89-AB) July-Aug. 1992
sium abstract, SP-131 (89-AB) MarApr. 1992	-Reliability-based design methodologies-Symposium abstract, SP-133 (89-AB) July-Aug. 1992
—Fracture mechanics applications for bond analysis—Symposium abstract, SP-134 (89-AB) SeptOct. 1992528	Safety provisions in design codes for reinforced concrete structures—
	Symposium abstract, SP 133-2 (89-AB) A. Scanlon and R. B. Corotis July-
M18) Mor. Apr. 1002	Aug. 1992
Relaxation tests—Fracture specimens—Loading rate effect (89-M49) Sept.	Sakai, Koji
Oct. 1992	—Deterioration in a rehabilitated prestressed concrete bridge (89-M36)

July-Aug. 1992328	Setting—Time—Superplasticized grout with silica fume (89-M17) Mar.
—Properties of granulated blast-furnace slag cement concrete—Sympo-	Apr. 1992
sium abstract, SP 132-73 (89-AB) May-June 1992	Shah, S. P. —Effects of shrinkage-reducing admixtures on restrained shrinkage
and microstructure—Symposium abstract, SP 132-72 (89-AB) May-June	cracking of concrete (89-M33) May-June 1992289
1992	-Disc. closure Do fibers increase the tensile strength of cement-based ma-
Sakamoto, M.—Application of high slag and fly ash, low-heat cement to	trixes? (88-M61) SeptOct. 1992
antiwashout underwater concrete—Symposium abstract, SP 132-86 (89-	-Disc. closure Fracture toughness of fiber reinforced concrete (88-M41)
AB) May-June 1992	May-June 1992
Sakuramoto, F.—Compressive strength of silica fume concrete at higher temperatures—Symposium abstract, SP 132-59 (89-AB) May-June 1992	Microscopic features of cracked and uncracked concrete railway sleepers
317	(89-M39) July-Aug. 1992
Samaha, Hani R.—Influence of microcracking on the mass transport prop-	-Prediction of alkali reactivity potential of some Australian aggregates
erties of concrete (89-M46) July-Aug. 1992416	and correlation with service performance (89-M2) JanFeb. 1992 13
Sandvik, M.—Prediction of strength development for silica fume concrete—	Shear strength
Symposium abstract, SP 132-53 (89-AB) May-June 1992317	—Anchors in concrete—Symposium abstract, SP-130 (89-AB) JanFeb
Sansalone, Mary —Detecting flaws in concrete beams and columns using the impact-echo	—Beams with steel and synthetic fibers as shear reinforcement (89-M54
method (89-M44) July-Aug. 1992394# —Detection of voids in grouted	SeptOct. 1992499
ducts using the impact-echo method (89-M34) May-June 1992296	Sheinfeld, A. V.—Influence of different types of silica fume having varying
—Impact-echo signal interpretation using artificial intelligence (89-M20)	silica content on the microstructure and properties of concrete-Symposium
MarApr. 1992	abstract, SP 132-51 (89-AB) May-June 1992
Sarigaphuti, M.—Effects of shrinkage-reducing admixtures on restrained shrinkage cracking of concrete (89-M33) May-June 1992289	Shi, D.—Concrete microstructure and its relationships to pore structure, per meability, and general durability—Symposium abstract, SP 131-6 (89-AB
Sarkar, S. L.—Properties and microstructure of high-performance concretes	MarApr. 1992 215
containing silica fume, slag and fly ash—Symposium abstract, SP 132-50	Shotcrete
(89-AB) May-June 1992317	-Dry-mix-Rapid-set accelerators-Durability studies (89-M29) May
Sato, J. A.—New method for assessing frost damage in non-air-entrained	June 1992
hydraulic structures—Symposium abstract, SP 131-18 (89-AB) MarApr.	—Leaching minimized by admixtures—Symposium abstract, SP-132 (89
1992	AB) May-June 1992
from freshly cast mortar and concrete (89-M35) July-Aug. 1992323	gram (89-M19) MarApr. 1992
Scaling—Roller-compacted concrete with blended silica fume cement—	—Wet-mix—Influence of silica fume type and form on properties—Sym
Symposium abstract, SP-132 (89-AB) May-June 1992316	posium abstract, SP-132 (89-AB) May-June 1992316
Scaling tests—Normal and latex-modified concretes (89-M60) NovDec.	Should design codes consider fracture mechanics size effect?—Sympo
1992	sium abstract, SP 134-1 (89-AB) Z. P. Bažant SeptOct. 1992
-Allowable deflections: The other side of the equation—Symposium ab-	sium abstract, SP 132-28 (89-AB) May-June 1992
stract, SP 133-6 (89-AB) July-Aug. 1992	Shrinkage
-Safety provisions in design codes for reinforced concrete structures-	—Cracking—Fiber reinforced concrete (89-M33) May-June 1992289
Symposium abstract, SP 133-2 (89-AB) July-Aug. 1992	-New prediction models-Symposium abstract, SP-135 (89-AB) Nov.
Scheetz, B.—Concrete microstructure and its relationships to pore structure, permeability, and general durability—Symposium abstract, SP 131-6 (89-	Dec. 1992
AB) MarApr. 1992219	129 (89-AR) Jan -Feb 1992
Schelling, D. R.—Evaluation and analysis of hammerhead-type pier caps—	129 (89-AB) JanFeb. 1992
Symposium abstract, SP 133-13 (89-AB) July-Aug. 1992433	codes (89-M30) May-June 199226
Schutz, Ray—Durability of dry-mix shotcrete containing rapid-set acceler-	Shrinkage of statically compacted cement-phosphogypsum mixtures-
ators (89-M29) May-June 1992	Symposium abstract, SP 135-6 (89-AB) C. X. Ling, K. T. Lin, and W. F.
Scott, J. F.—Rapid test of concrete expansivity due to internal sulfate at- tack (89-M50) SeptOct. 1992469	Chang NovDec. 1992
Seawater	cementitious materials (89-M32) May-June 199227
-Fly ash concrete chloride ion concentration (89-M25) May-June 1992	Sikharulidze, Z. D.—Strength and fracture energy of concrete with an
238	without fly ash cured in water at different constant temperatures—Sympo
-Mortar containing fly ashes and slag-Durability-Symposium abstract,	sium abstract, SP 132-18 (89-AB) May-June 199231
SP-132 (89-AB) May-June 1992	Silica fume —Blended cement concretes—Reinforcement corrosion-resisting characteristics.
stract, SP-134 (89-AB) SeptOct. 1992	teristics (89-M37) July-Aug. 199233
Seismic performance of code-designed reinforced concrete frame struc-	—Bond and strength properties of lightweight aggregate concrete (89-M10)
tures—Symposium abstract, SP 133-16 (89-AB) H. H. M. Hwang and H.	JanFeb. 1992
M. Hsu July-Aug. 1992	Concrete—Compressive strength development—Symposium abstrac SP-132 (89-AB) May-June 1992
-High-strength concrete binders—Part A: Reactivity and composition of	—Concrete—Durability and mechanical properties—Symposium abstract
cement pastes with and without condensed silica fume—Symposium ab-	SP-132 (89-AB) May-June 1992
stract, SP 132-47 (89-AB) May-June 1992317	Concrete-Early temperature effect on compressive strength-Sympo
—High-strength concrete binders—Part B: Nonevaporable water, self-des-	sium abstract, SP-132 (89-AB) May-June 199231
iccation and porosity of cement paste with and without condensed silica fume—Symposium abstract, SP 132-48 (89-AB) May-June 1992317	—Concrete—Explosive spalling at elevated temperatures (89-M38) Jul- Aug. 1992
Senbetta, Ephraim	—Concrete—Overlays on bridge decks—Symposium abstract, SP-132 (8)
-Controlled cement hydration: Its effect on durability of concrete-Sym-	AB) May-June 199231
posium abstract, SP 131-9 (89-AB) MarApr. 1992219	 Concrete—Relationship between composition and mechanical prope
—New test procedure for impact resistance of industrial floor products (89-	ties—Symposium abstract, SP-132 (89-AB) May-June 199231
M53) SeptOct. 1992	—Concrete—Strength development prediction—Symposium abstract, Sl 132 (89-AB) May-June 1992
expansion anchors—Symposium abstract, SP 130-3 (89-AB) JanFeb.	-Expansion characteristics of expansive cement pastes (89-M51) Sept
1992	Oct. 1992
Sensitivity analysis of damaged concrete bridge girders—Symposium	-Frost resistance of non-air-entrained concrete (89-M45) July-Aug. 199
abstract, SP 133-10 (89-AB) S. W. Tabsh July-Aug. 1992433	40
Serviceability —Australian aggregates—Test methods for alkali-reactivity assessment	—Grout physical property studies (89-M17) MarApr. 1992
(89-M2) JanFeb. 1992	—High-performance concrete properties and microstructure—Symposiu abstract, SP-132 (89-AB) May-June 199231
—Concrete constructed structures—State of the art design developments—	-High-strength concrete modulus of elasticity and drying shrinkage pro
Symposium abstract, SP-133 (89-AB) July-Aug. 1992432	erties-Symposium abstract, SP-132 (89-AB) May-June 199231
-Concrete for low level nuclear waste disposal—Symposium abstract, SP-	—High-strength lightweight aggregate concrete fatigue life (89-M22) Ma
132 (89-AB) May-June 1992	Apr. 1992
Reliability assessment and reliability-based design—Symposium abstract, SP-133 (89-AB) July-Aug. 1992432	MortarMoisture propertiesSymposium abstract, SP-132 (89-A) May-June 199231
Serviceability design in current Australian Code—Symposium abstract,	—Physical properties and durability of concrete—Symposium abstract, S
SP 133-5 (89-AB) B. V. Rangan July-Aug. 1992433	132 (89-AB) May-June 199231
Serviceability of prestressed composite members—Symposium abstract,	-Strength of concrete and constituent materials (89-M42) July-Aug. 19
SP 129-10 (89-AB) Y. S. Joo and M. K. Tadros JanFeb. 1992112	31

-Type and form-Wet-mix shotcrete properties-Symposium abstract, SP-132 (89-AB) May-June 1992316	Springenschmid tures—Symposia
Silica fume in concrete—An overview—Symposium abstract, SP 132-46	Stability-Air vo
(89-AB) K. H. Khayat and P. C. Aïtcin May-June 1992317 Silica fume-polymer mortars for rehabilitation of bridge decks—Sym-	cized concrete m Standard practic
posium abstract, SP 132-68 (89-AB) T. A. Bürge May-June 1992317	ACI Committee
Simon, M. J.—Influence of immersion vibration on the void system of air-	Standard practic
entrained concrete—Symposium abstract, SP 131-4 (89-AB) MarApr.	and mass concr
1992 218	JanFeb. 1992
Simoncini, S.—Influence of fly ash on concrete carbonation and rebar cor- rosion—Symposium abstract, SP 132-14 (89-AB) May-June 1992316	Standard specifi brick, and othe
Sims, Ian—Quantifying microscopical examinations of concrete for AAR	nent epoxy adh
and other durability aspects—Symposium abstract, SP 131-14 (89-AB)	503 May-June 1
Mar - Anr 1992 219	Standard specifi
Simulation of uniform bond stress (89-M18) Homayoun H. Abrishami and	crete with a mul
Denis Mitchell MarApr. 1992	(89-ST) ACI Co Standard specifi
cement and high volumes of ground granulated slag (89-M61) NovDec.	crete by the use
1992554	Revision (89-ST
Size effect—Brittle failures of reinforced concrete structures—Symposium	Standard specifi
abstract, SP-134 (89-AB) SeptOct. 1992	503.4-92)—Rev Standards—Dry
Size effect in reinforced flexural members—Symposium abstract, SP 134- 2 (89-AB) W. H. Gerstle, P. Rahulkumar, P. P. Dey, and M. Xie SeptOct.	M30) May-June
1992	Static and dynan
Skalny, J.—Notes on international concrete research—Symposium abstract,	SP 130-8 (89-A)
SP-131 (89-AB) MarApr. 1992	Statistical variat
Slabs	forced cement
Condition assessmentImpact-echo automated field system (89-M20) MarApr. 1992	and Abdulrahma Steel and synthe
-Design for progressive cracking—Symposium abstract, SP-134 (89-AB)	Robert Ward, an
SeptOct. 1992	Steel-concrete be
Slags	Mor JanFeb. 1
-High-performance concrete properties and microstructure—Symposium	Steel fibers—Co
abstract, SP-132 (89-AB) May-June 1992 316 Mortar resistance to seawater—Symposium abstract, SP-132 (89-AB)	1992 Step-by-step inte
May-June 1992	stressed concre
—Type and replacement level influence on properties of concrete—Sym-	Zarghamee and
posium abstract, SP-132 (89-AB) May-June 1992316	Strain hardening
Slump tests—Fresh fibrous mixes—Effects of steel fiber reinforcement (89-	MarApr. 1992
M41) July-Aug. 1992	Strain-rate sensi
Smeplass, S.—High-strength concrete containing silica fume—Impact of aggregate type on compressive strength and E-modulus—Symposium ab-	Heum Yon, Ne
stract, SP 132-57 (89-AB) May-June 1992317	Strains
Smith, D. M.—Interaction of thermal stress and concrete creep—Sympo-	—Drying shrink
sium abstract, SP 135-3 (89-AB) NovDec. 1992	dictions (89-)
Snow, Peter G.—Sulfate resistance of concrete containing fly ash—Sym-	—Dynamic fra
posium abstract, SP 131-13 (89-AB) MarApr. 1992	—Dynamic fra
umes of blast-furnace slag and fly ash—Symposium abstract, SP 132-7 (89-	—Dynamic ma
AB) May-June 1992316	Strength-Matu
Soils—Petroleum contaminated—Effect on concrete with and without fly	mortar mixes (8
ash—Symposium abstract, SP-132 (89-AB) May-June 1992316	Strength and fra
Some moisture sorption properties of silica fume mortar—Symposium	in water at dif
abstract, SP 132-49 (89-AB) E. Atlassi May-June 1992317 Sone, T.— Properties of concrete using newly developed low-heat cements	132-18 (89-AB Strength charac
and experiments with mass concrete model—Symposium abstract, SP 132-	posium abstract
76 (89-AB) May-June 1992318	Strength design
Sopko, S. J.—Design and serviceability of reinforced concrete floor sys-	JanFeb. 1992
tems—Symposium abstract, SP 133-7 (89-AB) July-Aug. 1992433	Strength develo
Soroushian, Parviz —Drying shrinkage characteristics of carbon fiber reinforced cement com-	containing hig M40) W. S. La
posites—Symposium abstract, SP 135-5 (89-AB) NovDec. 1992 .606	MI40) W. S. La
—Effect of steel fiber reinforcement on fresh mix properties of concrete (89-	Strength of mo
M41) July-Aug. 1992	cured in sodiu
-Freeze-thaw durability of lightweight carbon fiber reinforced cement	AB) F. Mazlum
composites (89-M52) SeptOct. 1992491	Strengthening-
—Mechanical properties of concrete materials reinforced with polypropy- lene or polyethylene fibers (89-M58) NovDec. 1992535	July-Aug. 1992 Stress analysis
-Optimization of the use of lightweight aggregates in carbon fiber rein-	MarApr. 1992
forced cement (89-M31) May-June 1992267	Stress-strain cu
-Statistical variations in the mechanical properties of carbon fiber rein-	compression (8
forced cement composites (89-M14) MarApr. 1992131	Stresses
—Disc. closure Fiber-type effects on the performance of steel fiber rein-	-Biaxial-Pat
forced concrete (88-M16) JanFeb. 1992	1992 —Multiaxial—
June 1992	behavior (89
Spalling—Explosive—Silica fume concrete (89-M38) July-Aug. 1992	-Prestressed of
	Feb. 1992
Specifications—Latex-modified concrete overlay for bridge deck—Mate-	-Reinforced a
rials and construction materials—Proposed standard (89-M57) SeptOct.	posium abstr
1992	Structural designation
—High-strength fiber reinforced concrete (89-M48) SeptOct. 1992 .449	SP-134 (89-AB Stryczek, S.—U
—Shrinkage reducing admixture concretes (89-M33) May-June 1992	beds—Sympos
289	Studies on mari
Splitting tensile strength and compressive strength relationship at early	ment and port
ages (88-M14)	132-87 (89-AB
—Francis A. Oluokun, Edwin G. Burdette, and J. Harold Deatherage V. 88	Studs—Headed
MarApr. 1991, p. 115	(89-AB) JanF Study on prope

tures—Symposium abstract, SP 132-43 (89-AB) May-June 1992317 Stability—Air void system—Influence of soluble alkalies in superplasti-
cized concrete mixtures (89-M3) JanFeb. 1992.
cized concrete mixtures (89-M3) JanFeb. 1992
ACI Committee 308 May-June 1992
Standard practice for selecting proportions for normal, heavyweight,
and mass concrete (ACI 211.1)—Revision (89-ST) ACI Committee 211
JanFeb. 1992
Standard specification for bonding hardened concrete, steel, wood,
brick, and other materials to hardened concrete with a multi-compo-
nent epoxy adhesive (ACI 503.1-92)—Revision (89-ST) ACI Committee
503 May-June 1992
crete with a multi-component epoxy adhesive (ACI 503.2-92)—Revision
(89-ST) ACI Committee 503 May-June 1992
(89-ST) ACI Committee 503 May-June 1992
crete by the use of a multi-component epoxy adhesive (ACI 503.3-92)—
Revision (89-ST) ACI Committee 503 May-June 1992315
Standard specification for repairing concrete with epoxy mortars (ACI
503.4-92)—Revision (89-ST) ACI Committee 503 May-June 1992315 Standards—Drying shrinkage strain prediction on large specimens (89-
Standards—Drying shrinkage strain prediction on large specimens (89-
M30) May-June 1992
Static and dynamic long-term behavior of anchors—Symposium abstract,
SP 130-8 (89-AB) W. Ammann JanFeb. 1992
Statistical variations in the mechanical properties of carbon fiber rein-
forced cement composites (89-M14) Parviz Soroushian, Mohamad Nagi,
and Abdulrahman Alhozaimy MarApr. 1992
Robert Ward, and Ali M. Hamza Sent -Oct 1902
Robert Ward, and Ali M. Hamza SeptOct. 1992
Mor JanFeb. 1992
Mor JanFeb. 1992
199232
Step-by-step integration procedure for computing state of stress in pro-
stressed concrete pipe—Symposium abstract, SP 129-9 (89-AB) M. S.
Zarghamee and W. R. Dana JanFeb. 1992
Strain hardening—Rate—Dynamic effects in concrete materials (89-M16)
MarApr. 1992
Strain-rate sensitivity of concrete mechanical properties (89-M16) Jung-
Heum Yon, Neil M. Hawkins, and Albert S. Kobayashi MarApr. 1992
Strains 146
-Drying shrinkage-Experimental values versus ACI and CEB code pre-
dictions (89-M30) May-June 1992 263 —Dynamic fracture mechanics of concrete (89-M28) May-June 1992
Control (07-1130) May-Julie 1772
—Livnamic tracture mechanics of concrete (X9-M/X) May-June 1992
252
252
252 —Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146
— 252 —Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 188
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 188 Strength and fracture energy of concrete with and without fly ash cured
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ast cured in water at different constant temperatures—Symposium abstract, SP
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 —146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 —188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992316
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992 Strength characteristics of flowable mortars containing coal ash—Sym-
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB)
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 112
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992.
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. 1. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. Strength of mortar made with cement containing rice husk ash and
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 362 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Livan May-June 1992. 317
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36)
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36)
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15)
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992 328 Stress analysis—Heat of hydration effects in massive structures (89-M36) MarApr. 1992 139
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 139 Stress-strain curve—High-strength fiber reinforced concrete under axial
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992 139 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 146 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 362 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M15) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54
—Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 362 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992. 328 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stresses in curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec.
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992 328 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 139 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992. 564
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M15) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992 ——Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992 ——Multiaxial—Steel fiber reinforced concrete strength and deformational
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 362 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M36) July-Aug. 1992. 328 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992. 54 Multiaxial—Steel fiber reinforced concrete strength and deformational behavior (89-M4) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestresse
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 360 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M15) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992. 54 Stresses concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 31 —Reinforced and prestressed columns—Time-dependent analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Henciforced and prestressed columns—Time-dependent analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Streutraid design—Mixed mode fracture concept—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Streutraid design—Mixed mode fracture concept—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 360 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M15) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 54 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992. 54 Stresses concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 31 —Reinforced and prestressed columns—Time-dependent analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Henciforced and prestressed columns—Time-dependent analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Streutraid design—Mixed mode fracture concept—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312 Streutraid design—Mixed mode fracture concept—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 312
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992. 188 Strength and fracture energy of concrete with and without fly ash cured in water at different constant temperatures—Symposium abstract, SP 132-18 (89-AB) J. J. Brooks and Z. D. Sikharulidze May-June 1992. 316 Strength characteristics of flowable mortars containing coal ash—Symposium abstract, SP 132-8 (89-AB) C. I. Lai May-June 1992. 316 Strength design method—Anchors—Symposium abstract, SP-130 (89-AB) JanFeb. 1992. 112 Strength development and temperature rise in large concrete blocks containing high volumes of low-calcium (ASTM Class F) fly ash (89-M40) W. S. Langley, G. G. Carette, and V. M. Malhotra July-Aug. 1992. 360 Strength of mortar made with cement containing rice husk ash and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) F. Mazlum and M. Uyan May-June 1992. 317 Strengthening—Extending life of deteriorated concrete structures (89-M15) July-Aug. 1992 Stress analysis—Heat of hydration effects in massive structures (89-M15) MarApr. 1992. 328 Stress-strain curve—High-strength fiber reinforced concrete under axial compression (89-M7) JanFeb. 1992. 34 Stresses —Biaxial—Patched and nonpatched concrete behavior (89-M62) Nov-Dec. 1992. 35 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 31 —Reinforced and prestressed columns—Time-dependent analysis—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-129 (89-AB) JanFeb. 1992. 32 —Prestressed concrete pipe—Symposium abstract, SP-134 (89-AB) SeptOct. 1992. 528 Stryczek, S.—Use of blast-furnace slag cements in the bore
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992
Dynamic fracture properties of concrete (89-M16) MarApr. 1992 Strength—Maturity function for concrete made with several concrete and mortar mixes (89-M21) MarApr. 1992

fly ash—Symposium abstract, SP 132-20 (89-AB) Y. Matsufuji, H. Kohata, K. Tagaya, H. Teramoto, Y. Okawa, and S. Okazawa May-June 1992	Temperature —Drying shrinkage strains on large concrete blocks—Experimental eval-
Study on the effects of blast-furnace slag on properties of no-slump con-	uation (89-M30) May-June 1992
crete mixtures—Symposium abstract, SP 132-75 (89-AB) K. Togawa and	61
J. Nakamoto May-June 1992318 Sturrup, V. R.	-Long-term properties of concrete—Symposium abstract, SP-131 (89- AB) MarApr. 1992
—Disc. Deterioration of lightweight fly ash concrete due to gradual cryo-	-Rise-Large concrete blocks with high volumes of low-calcium fly ash
genic frost cycles (88-M28) MarApr. 1992208	(89-M40) July-Aug. 1992
—Disc. Role of concrete incorporating high volumes of fly ash in control-	-Strength gain under different curing conditions—Rate constant model
ling expansion due to alkali-aggregate reaction (88-M20) JanFeb. 1992	(89-M21) MarApr. 1992
Supata, N.—Fatigue of concrete composed of blast furnace slag or silica	process (89-M15) MarApr. 1992
fume under submerged conditions—Symposium abstract, SP 132-81 (89-	Teramoto, H.
AB) May-June 1992	—Properties of mortar containing ultra-fine fly ash particles—Symposium
Sugita, S.—Evaluation of pozzolanic activity of rice husk ash—Symposium abstract, SP 132-28 (89-AB) May-June 1992317	abstract, SP 132-6 (89-AB) May-June 1992
Sulfate attack	fly ash—Symposium abstract, SP 132-20 (89-AB) May-June 1992
-Cement content influence on durability (89-M63) Nov-Dec. 1992	316
	Terauchi, T. —Utilization of blast-furnace slag and silica fume for control- ling temperature rise in high-strength concrete—Symposium abstract, SF
Sulfate resistance	132-77 (89-AB) May-June 1992318
-Concrete containing fly ash (89-M9) JanFeb. 199269	Test equipment—Field permeability of in-service concrete (89-M11) Jan.
—Fly ash concrete—Symposium abstract, SP-132 (89-AB) May-June 1992	Feb. 1992
316 —High-volume slag concretes (89-M61) NovDec. 1992	Test methods —Alkali aggregate reaction potential of some Australian aggregates (89-
—Silica fume-modified mortars—Symposium abstract, SP-132 (89-AB)	M2) JanFeb. 1992
May-June 1992316	-Bond behavior between concrete and steel (89-M18) MarApr. 1992
Sulfate resistance of concrete containing fly ash—Symposium abstract,	
SP 131-13 (89-AB) P. J. Tikalsky, R. L. Carrasquillo, and Peter G. Snow MarApr. 1992	Expansion measurements—Delayed ettringite formation (89-M50) Sept. Oct. 1992
Sulfate resistance of mortars containing ground granulated blast-fur-	—Flaw detection—Impact-echo instrumentation and signal processing ad-
nace slag with variable alumina content—Symposium abstract, SP 132-	vancements (89-M20) MarApr. 1992178
82 (89-AB) J. P. H. Frearson and D. D. Higgins May-June 1992318	—Impact resistance of industrial floor products (89-M53) SeptOct. 1992
Sulfates—Fly ash concrete resistance—Symposium abstract, SP-131 (89- AB) MarApr. 1992	
Sullivan, Patrick J. E.—Disc. closure Testing and evaluation of concrete	posium abstract, SP-132 (89-AB) May-June 1992316
strength in structures (88-M58) July-Aug. 1992428	—Void detection in beams and columns (89-M44) July-Aug. 1992394
Superplasticizers	Testing and analysis of base plate connections—Symposium abstract, SI
—Air-void system production and stability—Influence of alkalies (89-M3) JanFeb. 1992	130-11 (89-AB) P. Carrato JanFeb. 1992
—Fly ash concrete—Durability against corrosion (89-M25) May-June 1992	—Patrick J. E. Sullivan V. 88 SeptOct. 1991, p. 530
238	—Disc. by Alexander M. Leshchinsky, N. P. Rajamane, and author July
—Grout containing silica fume—Physical properties (89-M17) MarApr.	Aug. 1992
1992	Tests—Durability of concrete and mortar surfaces—Symposium abstract SP-131 (89-AB) MarApr. 1992218
diction equations—Symposium abstract, SP 130-2 (89-AB) JanFeb. 1992	Thaulow, N.—Mitigating effect of pozzolans on alkali silica reactions—
	Symposium abstract, SP 132-30 (89-AB) May-June 1992317
Suzuki, K.—Compressive strength of silica fume concrete at higher tem-	Thermal stresses
peratures—Symposium abstract, SP 132-59 (89-AB) May-June 1992	—Creep of concrete—Symposium abstract, SP-135 (89-AB) NovDec 1992 ———————————————————————————————————
Swamy, R. N.	-High-strength concrete for large structural members (89-M8) JanFeb
-Durability of rebars in concrete-Symposium abstract, SP 131-3 (89-	1992
AB) MarApr. 1992	Thermal stresses in large high-strength concrete columns (89-M8
crostructure—Symposium abstract, SP 132-72 (89-AB) May-June 1992	William D. Cook, Buquan Miao, Pierre-Claude Aïtcin, and Denis Mitchel JanFeb. 1992
318	Thomas, J. O.—Utilization of sorbent slurry-injection modified fly ash—
-Role and effectiveness of mineral admixtures in relation to alkali silica	Symposium abstract, SP 132-22 (89-AB) May-June 1992310
reaction—Symposium abstract, SP 131-12 (89-AB) MarApr. 1992	Thomas, M. D. A.—Investigation into the long-term in situ performance of
Swartz, S. E.—Fracture mechanics approaches in modeling the pullout of	high fly ash content concrete used for structural application—Symposium
anchor bolts—Symposium abstract, SP 134-4 (89-AB) SeptOct. 1992	abstract, SP 132-1 (89-AB) May-June 1992
	for concrete (89-M11) JanFeb. 1992
Synthetic fibers—Effectiveness as shear reinforcement (89-M54) SeptOct.	Tikalsky, P. J.
1992499	—Influence of fly ash on the sulfate resistance of concrete (89-M9) Jan.
T .	Feb. 199269 —Sulfate resistance of concrete containing fly ash—Symposium abstract
	SP 131-13 (89-AB) MarApr. 1992219
Tabsh, S. W.—Sensitivity analysis of damaged concrete bridge girders—	Time-dependent deflections of prestressed members: Rational and ap
Symposium abstract, SP 133-10 (89-AB) July-Aug. 1992	proximate methods—Symposium abstract, SP 129-6 (89-AB) A. Aswa JanFeb. 1992
posium abstract, SP 129-10 (89-AB) JanFeb. 1992	Tobinai, K.—Comparative study of natural zeolites and other inorganic ad
Taerwe, Luc R.—Influence of steel fibers on strain-softening of high-	mixtures in terms of characterization and properties of mortars—Sympo
strength concrete (89-M7) JanFeb. 1992	sium abstract, SP 132-34 (89-AB) May-June 199231
Tagaya, K.—Study on properties of concrete with ultra-fine particles produced from fly ash—Symposium abstract, SP 132-20 (89-AB) May-June	Tochigi, T.—Effect of mixing method on mechanical properties and por
1992	structure of ultra high-strength concrete—Symposium abstract, SP 132-5 (89-AB) May-June 1992
Takagi, N.—Fatigue of reinforced silica fume concrete beam under the en-	Togawa, K Study on the effects of blast-furnace slag on properties of no
vironment of water or chloride solution—Symposium abstract, SP 132-66	slump concrete mixtures—Symposium abstract, SP 132-75 (89-AB) May
(89-AB) May-June 1992	June 1992
slag cement and portland cement with silica fume—Symposium abstract,	sium abstract, SP 132-28 (89-AB) May-June 1992
SP 132-87 (89-AB) May-June 1992318	Tokyay, M.
Taniguchi, H.—Resistance to freezing and thawing and chloride diffusion	-Investigations on the sulfate resistance of high-lime fly ash incorporating
of anti-washout underwater concrete containing blast-furnace slag—Symposium abstract, SP 132-84 (89-AB) May-June 1992	PC-fa mortars—Symposium abstract, SP 132-16 (89-AB) May-Jur
Tank, Rajesh C Maturity functions for concretes made with various ce-	-Mineralogical investigations of high-lime fly ashes—Symposium at
ments and admixtures (89-M21) MarApr. 1992188	stract, SP 132-5 (89-AB) May-June 199231
Tazawa, E.—Properties of mortar containing ultra-fine fly ash particles— Symposium abstract, SP 132-6 (89-AB) May-June 1992316	Tomisawa, T.—Properties of super low heat cement incorporating large
Symposium austract, SF 132-0 (69-AB) May-June 1992316	amounts of ground granulated blast furnace slag of high fineness-Sym

fly ash, blast-furnace slag and silica fume—Symposium abstract, SP 132-	
9 (89-AB) May-June 1992316	Wafa, Faisal F.—Mechanical properties of high-strength fiber reinforced
Torrenti, Jean Michel-Disc. Biaxial strength and deformational behavior	concrete (89-M48) SeptOct. 1992449
of plain and steel fiber concrete (88-M42) May-June 1992	Walls—Grouted ducts—Void detection using impact-echo method (89- M34) May-June 1992
—Carbon fiber-cementitious composites with silica fume addition—Sym-	Walther, R.—Evaluation of expansion anchor ultimate tensile capacity pre-
posium abstract, SP-132 (89-AB) May-June 1992	diction equations—Symposium abstract, SP 130-2 (89-AB) JanFeb. 1992
131	Ward, Robert—Steel and synthetic fibers as shear reinforcement (89-M54)
—High-strength fiber reinforced concrete (89-M48) SeptOct. 1992	SeptOct. 1992
—Industrial floor materials—New test procedure (89-M53) SeptOct. 1992 	—Corrosive attack on concrete—Indices of aggressiveness —Symposium abstract, SP-131 (89-AB) MarApr. 1992218
—Steel fiber reinforced concrete (89-M59) NovDec. 1992	—Field permeability test apparatus and method—Features and evaluation (89-M11) JanFeb. 1992
54	Water-borne adhesives—Concrete bonding applications—Committee re-
Traina, Leonard A.—Disc. closure Biaxial strength and deformational be-	port (89-M12) JanFeb. 199290
havior of plain and steel fiber concrete (88-M42) May-June 1992310	Wecharatana, Methi—Disc. closure Fracture toughness of fiber reinforced concrete (88-M41) May-June 1992304
Tricalcium aluminate—Chloride binding and corrosion of steel in concrete (89-M1) JanFeb. 1992	Wet-mix silica fume shotcrete: Effect of silica fume form—Symposium
Trottier, JF.—Disc. Fiber-type effects on the performance of steel fiber	abstract, SP 132-67 (89-AB) D. R. Morgan and J. Wolsiefer, Sr. May-June
reinforced concrete (88-M16) JanFeb. 1992	1992317
	Wiewel, H.—Design guidelines for anchorage to concrete—Symposium ab-
U	stract, SP 130-1 (89-AB) JanFeb. 1992
	form—Symposium abstract, SP 132-67 (89-AB) May-June 1992317
Ukita, K.—Properties of high-strength concrete using "classified fly ash"—	Wong, L. C.—Microstructure of cement-based grouts containing fly ash and
Symposium abstract, SP 132-3 (89-AB) May-June 1992316	brine—Symposium abstract, SP 132-35 (89-AB) May-June 1992317
Ukrainčik, V.—Concrete structure and protection of steel reinforcement—	Workability —Flow behavior of cement paste (89-M43) July-Aug. 1992
Symposium abstract, SP 131-1 (89-AB) MarApr. 1992218 Underwater structures—Antiwashout concrete with blast furnace slag—	-Fresh concrete using different fiber types (89-M41) July-Aug. 1992
Symposium abstract, SP-132 (89-AB) May-June 1992316	369
Upgrading of PFA for utilization in concrete—Symposium abstract, SP	Wu, Y. G.
132-26 (89-AB) H. A. W. Cornelissen and C. H. Gast May-June 1992	 Long-term behavior of a composite prestressed concrete railway bridge: Part 1—Experiment—Symposium abstract, SP 129-1 (89-AB) JanFeb.
316	1992
Use of blast-furnace slag cements in the boreholes in salt beds—Symposium abstract, SP 132-85 (89-AB) W. Brylicki, J. Maolepszy, and S.	—Long-term behavior of a composite prestressed concrete railway bridge:
Stryczek May-June 1992	Part II—Constitutive law and analysis—Symposium abstract, SP 129-7
Utilization of blast-furnace slag and silica fume for controlling temper-	(89-AB) JanFeb. 1992
ature rise in high-strength concrete—Symposium abstract, SP 132-77	
(89-AB) M. Yurugi, T. Mizobuchi, and T. Terauchi May-June 1992318	XYZ
Utilization of sorbent slurry-injection modified fly ash—Symposium abstract, SP 132-22 (89-AB) R. C. Joshi, J. O. Thomas, M. Mozes, and R.	
Mangal May-June 1992	Xie, M.—Size effect in reinforced flexural members—Symposium abstract,
Uyan, M.—Strength of mortar made with cement containing rice husk ash	SP 134-2 (89-AB) SeptOct. 1992
and cured in sodium sulphate solution—Symposium abstract, SP 132-29 (89-AB) May-June 1992	Yamada, K.—Properties of low-heat generating concrete containing large
U	volumes of blast-furnace slag and fly ash—Symposium abstract, SP 132-7 (89-AB) May-June 1992
	Yamamoto, K.—Properties of high-strength concrete using "classified fly
	ash"—Symposium abstract, SP 132-3 (89-AB) May-June 1992316
Vaccari, D. A.—Fly ash containing petroleum contaminated soils—Sym-	Yamaoka, R.—High-strength concrete for wall foundation using ternary blended cement with intermixture of blast-furnace slag and fly ash—Sym-
posium abstract, SP 132-38 (89-AB) May-June 1992317	posium abstract, SP 132-78 (89-AB) May-June 1992318
Vandewalle, L.—Effect of curing on the strength development of mortar	Yang, Hong-Jen—Behavior of steel fiber reinforced concrete in multiaxial
containing high volumes of fly ash-Symposium abstract, SP 132-4 (89-	loading (89-M4) JanFeb. 199232
AB) May-June 1992	Yield-line method—Fresh concrete properties (89-M24) May-June 1992
MarApr. 1992	Yimaz, V. T.—Effect of silica fume addition on the durability of alkali-re-
Vayenas, Costas G.—Hydration and carbonation of pozzolanic cements	sistant glass fibre in cement matrices—Symposium abstract, SP 132-62
(89-M13) MarApr. 1992	(89-AB) May-June 1992
Veeman, W. S.—Reaction mechanism of blended cements: A ²⁹ Si NMR study, The—Symposium abstract, SP 132-44 (89-AB) May-June 1992	Yon, Jung-Heum —Fracture process zone for concrete for dynamic loading (89-M28) May-
study, The—Symposium abstract, SF 132-44 (69-AB) May-June 1992	June 1992
Vibration—Effect on air void system—Symposium abstract, SP-131 (89-	-Strain-rate sensitivity of concrete mechanical properties (89-M16) Mar
AB) MarApr. 1992	Apr. 1992
displacements—Symposium abstract, SP 130-7 (89-AB) JanFeb. 1992	Symposium abstract, SP 132-6 (89-AB) May-June 1992316
	Yurugi, M.—Utilization of blast-furnace slag and silica fume for control-
Violini, D.—High-strength concretes incorporating different coarse aggre-	ling temperature rise in high-strength concrete—Symposium abstract, SP
gates (89-M26) May-June 1992	132-77 (89-AB) May-June 1992
—Fresh concrete—Rheological constant measuring method (89-M24)	gregates (89-M26) May-June 1992242
May-June 1992	Zarghamee, M. S.—Step-by-step integration procedure for computing state
-Grout containing silica fume and superplasticizer (89-M17) MarApr.	of stress in prestressed concrete pipe—Symposium abstract, SP 129-9 (89-
Viscosity equation for fresh concrete (89-M24) Jiro Murata and Hiroji	AB) JanFeb. 1992
Kikukawa May-June 1992230	AB) May-June 1992316
Voids	Zerbino, Raul
-Impact echo method for flaw detection in concrete (89-M34) May-June	-High-strength concretes incorporating different coarse aggregates (89-
—Impact-echo signal interpretation using artificial intelligence (89-M20)	M26) May-June 1992
MarApr. 1992	Feb. 1992108
Voyiadjis, George Z.—Biaxial testing of repaired concrete (89-M62) Nov-	Zhou, Yixia—Non-air-entrained high-strength concrete—Is it frost resis-
Dec. 1992	tant? (89-M45) July-Aug. 1992406

posium abstract, SP 132-74 (89-AB) May-June 1992318